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*Commerce*

# SOUTHERN TEXTILE BULLETIN

VOL. 29

CHARLOTTE, N. C., THURSDAY, NOVEMBER 19, 1925

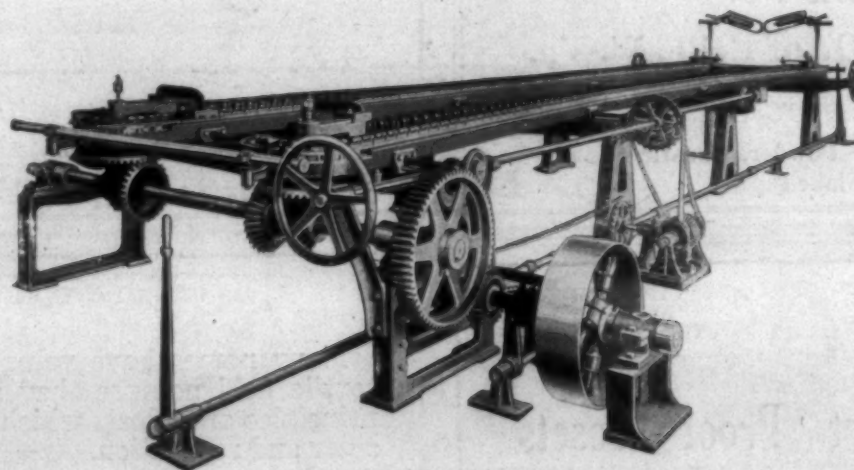
NUMBER 12

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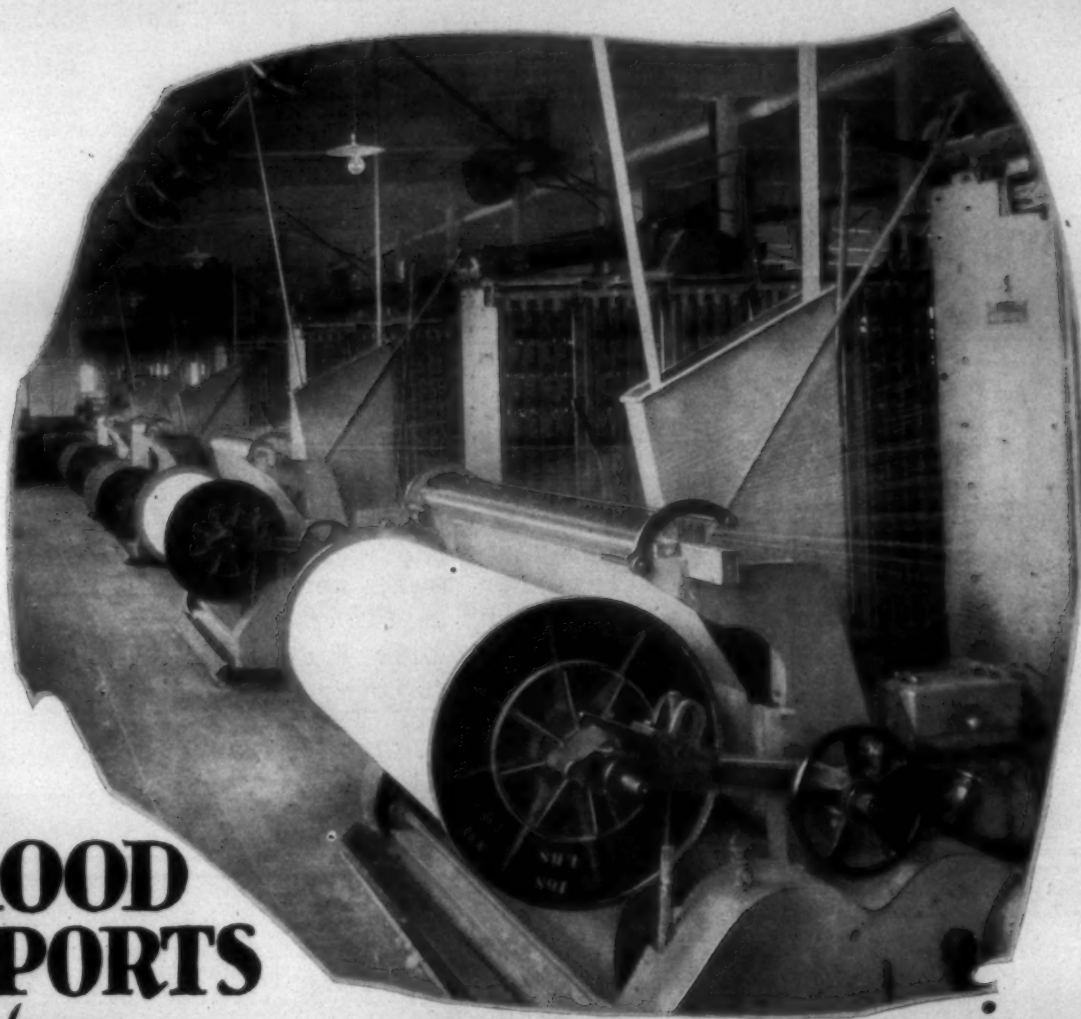
Yours sincerely,

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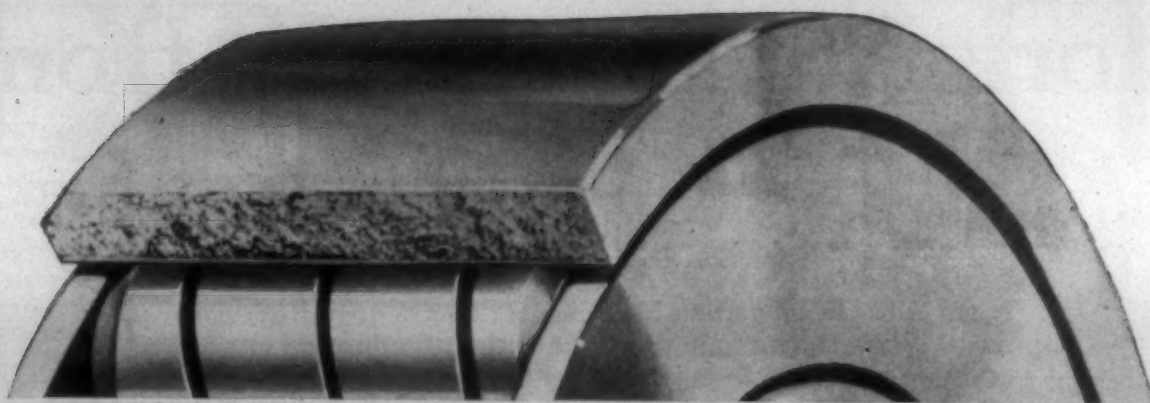


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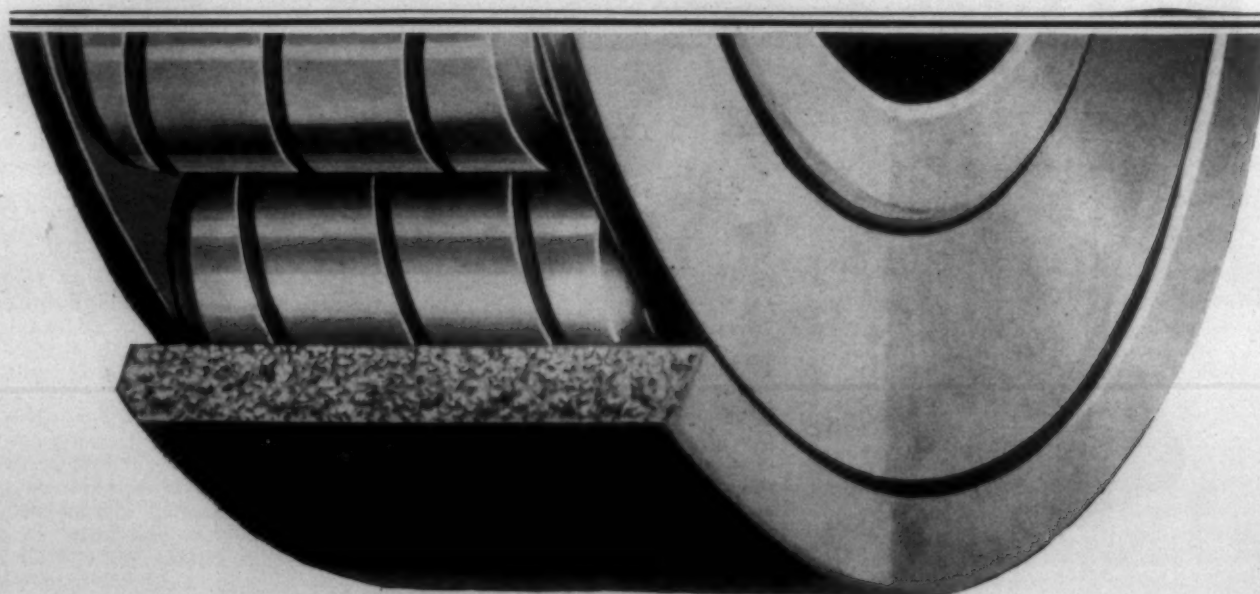
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# SOUTHERN TEXTILE BULLETIN

PUBLISHED EVERY THURSDAY BY CLARK PUBLISHING COMPANY, 39-41 S. CHURCH STREET, CHARLOTTE, N. C. SUBSCRIPTION \$2.00 PER YEAR IN ADVANCE. ENTERED AS SECOND CLASS MAIL MATTER MARCH 2, 1911 AT POSTOFFICE, CHARLOTTE, N. C., UNDER ACT OF CONGRESS, MAR. 3, 1879.

VOL. 29

CHARLOTTE, N. C., THURSDAY, NOVEMBER 19, 1925

NUMBER 12

## *Notes on the Science Of Dyeing*

IT is about a year since I had the pleasure of addressing you on the subject of the Science of Dyeing. In this discussion we examined the phenomena relating to the attachment of dyes to fibers which, broadly speaking, constitutes the essence of dyeing. Since the topic is involved in much theory and controversy it is as yet impossible to speak of definite laws of dyeing, and the practical dyer is apt to shrug his shoulders and think, even though he is too polite to say it, "How does all this scientific talk help me; it confuses more than it explains." He weighs off his colors, dissolves them (maybe), fixes his dye-bath and is ready to proceed. But does he always succeed? Yes—providing he uses proper dyes and suitable methods. Atlas, for each technically valuable dye there are dozens, never successfully marketed, that are lacking in those properties which the dyer needs, and for each correct dyeing process there are probably thousands, tried and untried, which fall short of producing acceptable results.

What then constitutes a successful dye, or, inquiring from a different angle, what properties must a dye have to be valuable and on what inherent structural feature of the dye do these properties depend? As for dyeing methods, we may dismiss the matter for the time being with the simple explanation that the method must be adapted to the fabric which is being dyed and must suit the chemical characteristics of the dye to be used.

One of the fallacies in the work of some of the illustrious investigators, we noted in our former discussion, lies in the tendency to generalize on the basis of insufficient evidence—too few particulars. Interesting observations concerning a special dye, admittedly true, were stretched to cover all dyes. Experiments with one fiber were used to draw theories on chemically and physically fibers.

That class of organic substances which possess color and are capable of imparting their color to fabrics is termed dyes. For no other reason could so many different chemical individuals be classed in one group. And because of their manifold individualities we should think of them in subdivisions or small related groups, rather than as one all-

By Henry F. Herrmann before the American Association of Textile Chemists and Colorists

inclusive class, in attempting to study them. The practical dyer has learned how to do this, and success depends on the skill with which he recognizes these individualities and adapts his method of application to them. It is unfortunate that the scientists as a class know so little of the intimate peculiarities of individual colors. Much that they seek in the test tube is apparent in the dye kettle, and is common knowledge to the observant dyer. In order that we may guide our thoughts toward a clearer comprehension of the matter I propose to discuss the chemical characteristics of dyes as a class and in small related groups. The approach of this subject is elementary to an audience of technical men, but I ask you to follow the visible beaten paths in order that we may more easily steer our way along the hidden trails.

Color, first of all, depends on light. Without light we cannot have color. No substance possesses color in the absence of light. The color of a body gas or liquid absolutely depends on the light which it reflects or radiates. Since ordinary dyes do not radiate rays visible to the eye we may confine our discussion to reflected light in the case of opaque solids and transmitted light in the case of transparent objects and liquids. Objects possess individuality of color due to their property of absorbing light rays of certain wave length or frequency and of transmitting or repelling others. Just as a system of inductances and capacities is attuned to definite frequencies or wave lengths of the ether vibrations used in radio communication, just so due to their chemical and physical peculiarities molecular systems are attuned to the much higher light frequencies; they absorb some and pass on others.

Ordinary sunlight may be resolved into six primary colors. We ordinarily use a glass prism for this purpose, but in an homologous manner all colored substances resolve or refract light, and it is that fraction of the light which passes on or is reflected that gives it its individual color. The absorbed portions is invisible. It is the complement of that

which is visible. Logically, then, the proper blending of complementary colors should cause white. This can actually be demonstrated in the laboratory.

We now come to the consideration of the chemical features of dyes which render them responsive to certain light rays. It may be interesting in passing to note that the visible rays are not the only ones that work on chemicals. Some substances are radio active and experimentally have been used to function in the manner of the well-known radio tube. This property is due to cold electron emissivity, and is an interesting side-light on the activity of seemingly inert substances.

Chemical elements as well as their compounds exhibit colors. Iodine, sulphur, bromine, phosphorus, copper, gold and tin are typical instances. The salts of the metals carry a more pronounced color. Why then are they not suitable for use as dyes? We shall see.

The simple organic compounds resulting from the union of carbon with oxygen, nitrogen or sulphur are generally colorless or white. Why, then, do other organic substances possess color? On what properties does color depend? Is color as the aim of the research chemist pure chance? Are dyes discovered by accident or is it possible for the chemist to plan colors in advance and in a measure control his research accordingly?

Without attempting to delve too deeply into the abstruse and abstract chemical phases of the problem, for which much blackboard illustrating is necessary, and without trying to fully understand the complicated maze of scientific conditions which confront the present day experimenter in advanced organic research, we can roughly chart the general trend of his reasoning. Since an ordinary total analysis of organic substances does not distinguish between those which are colored and those which are uncolored, it is obvious that the mere presence in a molecule of certain elements (not even in definite proportions) does not result in color. Roughly two parts of copper, one of tin and one

of zinc yield a certain grade of brass. Varying the proportion alters the physical characteristics, but considerable leeway is permitted as to the ratio used. Not so with organic combinations. So many parts of carbon, so many of hydrogen, so much oxygen, nitrogen and sulphur may give a dye—but the same proportions differently associated may yield a colorless substance.

We may, therefore, deduce that color depends on chemical structure, on the manner in which the atoms are linked together or, in short, on the character of the molecule. In combining chemicals the use of strongly colored substances need not necessarily lead to a still stronger colored product. Quite frequently the union of two colorless substances will result in the most intense dyes.

In attempting to explain color formation and dyeing properties as applied to organic substances a well-known chemist, O. N. Witt, in 1876 announced a theory which is still held to-day and has proved a definite guide to the chemist. He assigned the name chromophores to certain atomic groupings which are usually encountered in colored substances and, a priori, may be considered necessary for color in organic compounds.

In order to exert its influence, a chromophore must be associated with a large number of carbon atoms. For this reason highly colored substances are usually encountered among the derivatives of hydro-carbons such as benzene, naphthalene and anthracene, the so-called aromatic hydro-carbons. By a combination of a chromophore with an aromatic compound, a new product is obtained. This is more or less colored and is one step nearer to being a finished dye. This substance is called a chromogen. Whereas chromophores are relatively few in number and are frequently repeated, chromogens are all more or less different and are responsible for individuality among dyes with respect to color.

Two typical chromophores are the well known divalent azo form— $N=N$ —and  $C=O$ . The former, when linking together two molecules of benzene, forms the chromogen azo benzene; the latter, anthraquinone. Fundamentally the aromatic base is



the same, but with different chromophores two totally different chromogens are found.

Chromogens, on reduction with nascent hydrogen, yield colorless compounds, but these conversions are usually reversible. A chromogen so decolorized is termed a leuco compound, but to be a true leuco body it must be susceptible of re-oxidation to its original color.

Certain definite reactive features are characteristic of finished soluble dyes. They are either acid, basic or neutral, due to the presence of certain additional groups necessary to render the chromogen soluble. The added groups are called auxo-chromes. They are chemically linked. The added groups are called auxo-chromes which are capable of salt formation. The most typical and common ones are OH, SO<sub>3</sub>H and COOH which are acidic and NH<sub>2</sub>, NHR, NR<sub>2</sub> (substituted amines) which are basic. Of these auxo-chromes the COOH and SO<sub>3</sub>H groups may usually be introduced with a chromogen without altering its shade materially. Intensified acidity (or basicity) results in increased dye value, and this is the true value of auxo-chromes. Aside from their solubilizing influence the basic auxo-chromes have a more pronounced properties depend rather in the chromogens.

In considering the auxo-chromes as necessary adjuncts to chromogens to render them suitable as dyes, it does not seem farfetched that chemically active textile fibers should exert an affinity for organic substances of the chromogen type.

The affinity of cotton for tannins and for the anilide of beta-oxy-naphthoic acid are examples of such attractions although they do not result in colored bodies.

It is well to emphasize that the dyeing properties of dyes are due to the auxo-chromes present. On them depends the acid, basic or substantive character of the dye, its solubility and its exhausting properties. The shade and fastness properties depend rather on the chromogens.

It should prove instructive to survey the more important dye classes and to name the most important members. The groups are named after the chromophore they are built on.

**Nitro Dyes.**—This class of dyes contains the chromophore NO<sub>2</sub>. The nitro derivatives of the hydrocarbons are practically colorless, but with an increase in the number of the nitro groups the color intensity increases; nitro phenol is practically white; di-nitro phenol is light yellow, but tri-nitro phenol, the well-known picric acid, have a very marked tinctorial power.

The nitro chromophore lends an acid character to the chromogen. Since it is usually true that increased acidity (or basic character) heightens the colorific value, it is preferable to combine the acid NO<sub>2</sub> chromophore with the acid auxo-chromes OH, SO<sub>3</sub>H. Basic auxo-chromes such as NH<sub>2</sub> oppose this acidity and suppress the color. When basic auxo-chromes are to be used it is necessary to compensate

for them by an increase in the number of NO<sub>2</sub> groups. The majority of nitro dyes are derivatives of phenols and naphthols and their sulphonic acids for this reason.

Piric acid, lacking sufficient auxo-chromes, is sparingly soluble in water and is difficult to apply as a dye. The introduction of further acidic sulphonic acid auxo-chromes results in more valuable properties. The important dye, Naphthol Yellow S, which is homologous to di-nitro phenol but contains two sulphonic groups, exhibits for this reason the solubility and dyeing properties expected of a true dye. The nitro group was discussed in some detail to illustrate the practical operation of the theory of balance between chromophores and auxo-chromes. The remaining groups will be treated very briefly. Nitroso or Quinone-Oxine dyes contain the chromophore—NO—formed by the action of nitrous acid on phenols or naphthols. Typical dyes are Gambine G or Y and Naphthol Green B.

Azo dyes comprise at least one-half of all commercial types. They are characterized by the chromophore—N = N in simple or modified form. Among the azo dyes are representatives of all groups—acid, basic and substantive. In enlarging upon the thought previously brought out that the chemist can and must aim his work along definite lines, it should prove interesting to touch on a few of the rules governing the simple coupling process of aromatic bases to diazotized amines. Most

dyes have at some time carried out similar processes, hardly realizing that the operations is governed by set rules.

1. Coupling takes place in the para position to the auxo-chrome group OH, NH<sub>3</sub>, NR<sub>2</sub> when this is free.

2. If the para position is occupied, coupling occurs in the ortho position.

3. If both ortho and para positions are occupied, coupling does not occur.

Typical azo dyes are Direct Black and Benzo Purpurine; Acid Fuch-sine D and Naphthol Blue Black; Bismark Brown and Indoline Blue.

Hydrazone dyes contain the chromophore NH—N. Typical dyes are Tartrazine, Xylene and Fast Light Yellows.

Stilbene dyes contain the chromophore —CH = CH—as occurring in stilbene or diphenyl ethylene C<sub>6</sub>H<sub>5</sub> — CH = CH — C<sub>6</sub>H<sub>5</sub>. Typical dyes are Sun Yellows and Mikado Oranges.

Dilphenyl methan dyes contain the chromophore —CH<sub>2</sub>—which in the case of Auramine is substituted to C —

NH.

Triphenyl methane dyes comprise a very large group based in oxidized hydrocarbons of methane character known as carbinols. These carbinols form the chromophores. They are colorless. To obtain dyes auxo-chromes are introduced into the carbinole molecule in the para position to the carbon atom of the methane

(Continued on Page 33)

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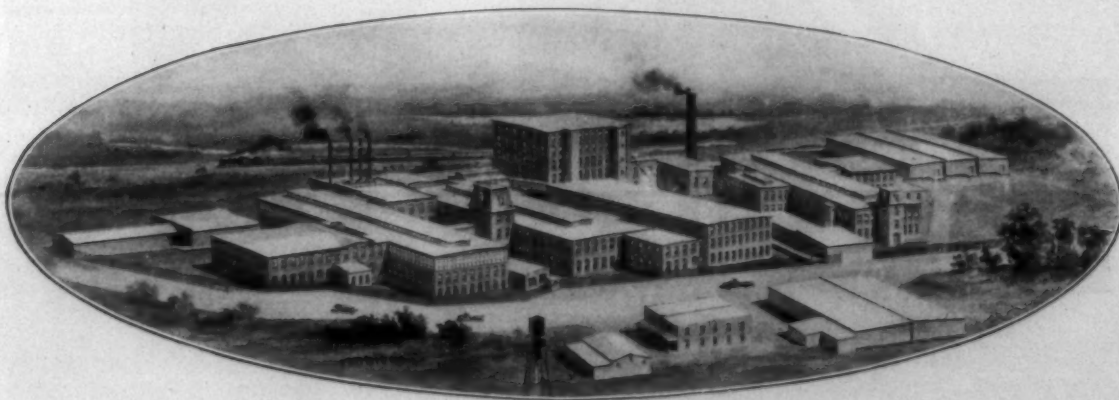


*Cannon Mills, Kannapolis, N. C.*



*Cannon Mills, York Plant*

Butterworth Machinery in the Cannon Mills—largest towel making plant in the world where 20 miles of yarn is spun every second. To produce this cotton requires the entire crop of 4,000 fifty-acre farms. Enough towels bearing the Cannon Mills trademark are finished on Butterworth Machinery every year to supply a towel to every man, woman and child in the United States.



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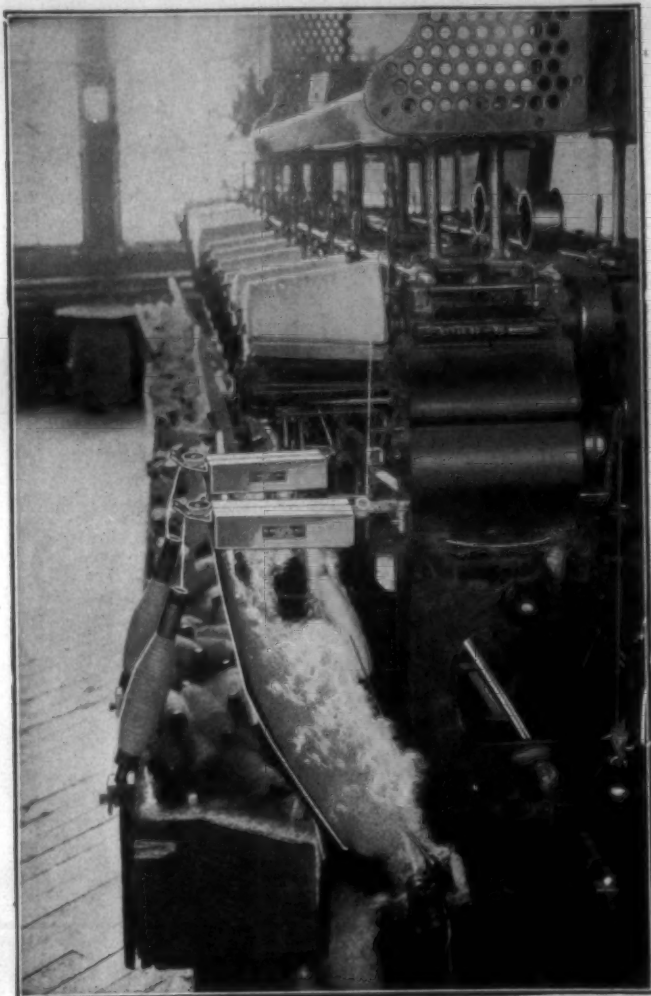
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It does not require inventions to make slubs, but often they are made, and that is another story.

We wish to tell you that the Eclipse Automatic Yarn Cleaner is sure death to slubs. The Eclipse Cleaner not only catches all the slubs but thoroughly removes all the dirt in the yarn.

Many knitting mills and spinning plants realize the extreme value of the Eclipse Cleaner, and are equipping their entire winding capacity with the Eclipse Cleaners. The basic principle of good knitting and weaving is thoroughly clean yarn.

Why make yourself believe you are getting the best results when you can absolutely improve your yarn with the Eclipse Cleaner.

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**Eclipse Textile Devices, Inc.**  
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Makers of

Automatic Yarn Cleaner, Automatic Stop Motion, Yarn Tension Device  
Eclipse Van Ness Dyeing Machine

## Sulphur Dyes on Mercerized Thread

SULPHUR dyes play an important part in the coloring of all classes of cotton material from raw stock to finished cloth, but no class of manufactured cotton has received more attention from dyers than yarns. Among the most important classes of cotton yarns dyed with sulphur colors are sewing and embroidery threads, for most purposes of which the sulphur dyes prove to be eminently satisfactory.

Cotton yarn dyeing offers no difficulties, but to secure the best results, it is necessary that the yarn be well boiled out before dyeing to ensure that the color goes on evenly, and that the penetration of the threads is complete. As a general rule, cotton yarns are given a preliminary soda boil which removes natural fats and waxes and whatever dirt the yarn may have accumulated during the manufacturing processes. Following the soda boil, the cotton is given a thorough wash with water to remove the soda, but since the sulphur dyebath is alkaline, this washing is frequently omitted. If very light and clear shades are to be dyed, the yarns may be bleached, but this is not generally resorted to except in special instances, the reason being that the sulphur dyes do not yield very bright shades.

The actual dyeing of cotton yarns is carried out in the usual form of open dye kettles, or in the more modern types of mechanically operated dye kettles, in which the cotton is kept in constant motion in a fixed volume of dye-bath. Since all sulphur dyes must be applied from a bath containing sodium sulfide, it is necessary that the kettle be constructed of wood or iron and without submerged pipes or fittings made of brass or copper. These facts are well known to all users of sulphur dyes.

In dyeing with the sulphur dyes, it is always advantageous to employ as short a dye-bath as possible, say 240 gallons for each 100 pounds of cotton yarn. This proportion allows ample space in the bath for the yarn to be moved about freely, and permits good circulation of the bath through and around the skeins.

For dyeing most light shades, including grays, the requisite amount of dyestuffs for the desired shade is dissolved in water containing  $1\frac{1}{2}$  times the amount of sodium sulfide concentrated as of dyestuff and when solution is effected, it is added to the dye-bath. (An exception to the foregoing is in the case of sulfur greens, which are dissolved with an equal amount of sodium sulfide concentrated). The dye-bath is then charged with  $2\frac{1}{2}$  per cent soda ash and 2 per cent Turkey Red oil, calculated on the weight of the yarn to be dyed. The bath is heated to  $120^{\circ}$  F., the yarn entered, given two or three turns, and the temperature raised to  $180^{\circ}$  F., and dyeing continued at this temperature for about  $\frac{1}{4}$  of an hour with slow but steady turning. Toward the conclusion of this time, samples are taken for matching, and when the match is struck, the yarn is lifted, allowed to

drain, and washed. Sometimes more than  $\frac{1}{4}$  of an hour is required for certain matches, which is taken care of by keeping the yarn completely immersed in the cooling bath.

For dark shades, usually from  $\frac{1}{4}$  to an equal amount of sodium sulfide is required in dissolving the dyestuff. The quantity may vary, according to the practice of each individual dyer, but the above is a fair general average. When the dye is dissolved, it is added to the dye-bath, together with 5 per cent soda ash and 2 per cent Turkey Red oil, both calculated on the weight of the cotton. Heat to  $120^{\circ}$  F., and enter the yarn giving two or three turns to assure saturation, and heat the bath to about  $195^{\circ}$  F. in 20 minutes, adding 15 to 30 per cent common salt. Dye for  $\frac{1}{4}$  of an hour at a temperature as close to  $195^{\circ}$  F. as possible; then wash and dry. It is to be noted that no common salt is used in the dye-bath for light or medium shades; it is only employed for the heavier shades.

Most sulfur dyes are benefited after dyeing and washing by being allowed to hang on poles in a place where there is free access of air; this is to effect a sort of oxidation that assure increased fastness of the dyed shade to both washing and rubbing. Of course, if the dyeings are from very strong dye-baths, and have not been well washed, there is always a possibility of crocking, which can only be guarded against by thorough washing.

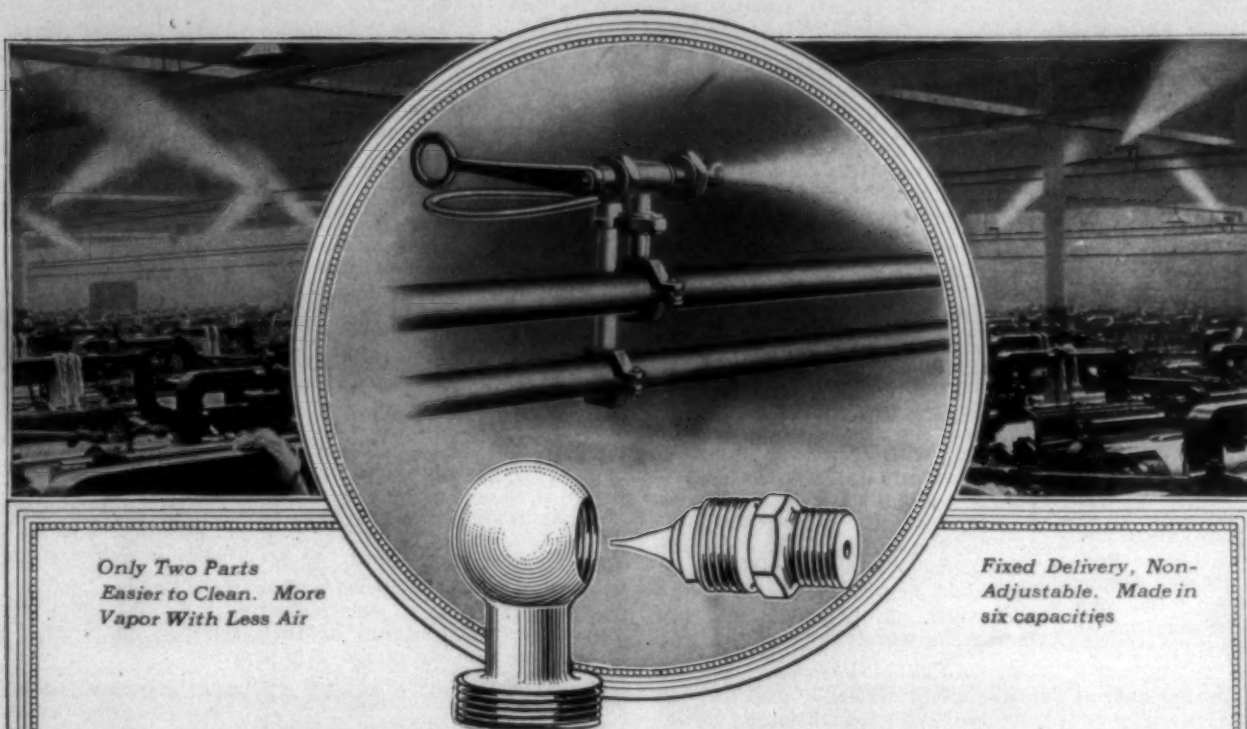
Of the two classes of cotton yarns commonly dyed, plain and mercerized, it is well known that the latter takes up more dye from the bath than the former, so that if it is desired to work most economically, it is necessary to employ the standing bath, and make due allowance for the difference in exhaustion. For light and medium shades, standing baths are not as important as baths used for full, heavy shades of blacks, browns, blues, greens, etc.

In dyeing sewing or other hard twisted threads, it is desirable to effect as thorough penetration as possible, which is in a great measure accomplished by the aid of the Turkey Red oil used. This substance materially aids in causing the dye solution to penetrate to the center of the thread. In this connection, however, the time element must not be overlooked, since the longer the immersion in the bath the greater is the opportunity for the penetration to be accomplished. Another point in this regard is to enter the yarn in a not too overheated dye-bath; the indicated temperature of  $120^{\circ}$  F. is found to be most satisfactory.

Sewing thread, unlike many other kinds of thread, is frequently subjected to a sort of polishing after it has been dyed and dried. While this polishing process is not a part of the dyer's duties, it may be of interest to mention, briefly, the ingredients and process. The polishing mixture usually consists of a mixture of caruba wax (Japan wax) saponified with sal soda in a water

(Continued on Page 33)





*Only Two Parts  
Easier to Clean. More  
Vapor With Less Air*

*Fixed Delivery, Non-  
Adjustable. Made in  
six capacities*

## The New Turbo Humidifier

This is the new "N Type" Turbo Humidifier. We have been testing it for nearly two years in laboratory and field.

It supercedes our old R-12 type. No more R-12's will be installed on new jobs. The N Type atomizer assembly, shown above, will interchange with the old R-12 atomizer assembly.

That and the Turbo principle are the only ways in which the N resembles the R. The R type was adjustable, which was all right when adjusted properly. Sometimes it wasn't. The N Type is non-adjustable but made in different water delivery capacities.

These capacities are fixed at the factory; six different sizes.

There are only two parts in atomizer; easier to clean; more vapor with less air; less attention required.

We have succeeded in cutting down the air used very greatly. This means much to users of atomizer systems who want to build up humidifier capacity without adding to compressor investment or operating cost.

This is the first public announcement of this N type head.

Without advertising, more than 10,000 have been sold and are in operation with most satisfactory results to every user without exception.



### Parks-Cramer Company

*Engineers & Contractors  
Industrial Piping and Air Conditioning*

Fitchburg

Boston

Charlotte



Right Rejoin

## Why Cotton Mills Have Been Moving South

By Richard Woods Edmunds

Richard Woods Edmunds, writing in the Boston News Bureau, of Boston, Mass., recently presented a series of articles dealing with the movement of cotton mills from New England to the South. He covered the subject so thoroughly and with such keen insight into real conditions in the South, that we secured special permission from the Boston News Bureau to reprint his articles.

Because Mr. Edmunds handled this subject in such an interesting and authoritative manner, we believe that his articles will be read with interest and appreciation by all Southern mill men.—Editor.

THERE is probably no other phase of Southern life more generally misrepresented, and therefore more generally misunderstood, than the living conditions in southern cotton mills. From conversations with southern people I have met socially I am led to believe the Southerners have almost as much positive misinformation about the employees in their largest industry—barring agriculture—as have the people of the North, East and West. I do not know how to account for this unless it is because the mills themselves have little to say and Southern papers ignore the subject, while magazines published in the North and East have persistently published much that is misleading or positively false. A good illustration of this occurred about ten years ago, when a well-known magazine sent a Miss DeGraffenreid to make a survey of conditions in Southern mills. Her article described, and her picture illustrated, the worst conditions and the worst class of people to be found in Southern mills, and ten years ago conditions were not so good as they are today. The Manufacturers' Record in an editorial criticized Miss DeGraffenreid and the magazine severely on the ground that her article had described, as representative of the South, the worst sore spots to be found there. If she wanted to publish these, the Record said, in justice she should have shown the best side also. Miss

DeGraffenreid was deeply offended by that criticism, and later, in an interview with the editor of the Manufacturers' Record, said she thought she had been unjustly criticized. The editor repeated this statement that if she wanted to publish the worst she should published the best along with it, in order to give a fair cross-section. Miss DeGraffenreid replied that she had taken pains to describe and illustrate the best also, but the editor of the magazine refused to publish her article unless she would first cut out all of the good side, as his readers only wanted the worst.

And so the Southern people themselves, along with the rest of the country, have been misled as to the condition of their own mills. They have been the more easily misled because most of the mills are in the country or the small towns where a few people see them or know what is going on.

I believe I am well within the facts when I say the people in many of the larger mills have an environment that is better in all important particulars except, possibly, the home life, than the environment of people of moderate or even large means in the small towns, while these in the villages of small mills have at least as good environment as people of moderate means in small towns, again excepting that of home life. I do not think there is any question at all but that people in all Southern mills, large and small, have much better environments than they could provide for themselves, either on the farms or at any other work open to them that they might be capable of doing. This is a consideration to be borne constantly in mind in estimating the value of life in Southern villages.

If I am to give any idea of the environment, the educational and recreational facilities of Southern mill

villages—and an immense majority of all Southern mill help lives in villages owned by the mills—possibly the best way is to select a few typical mills, and I will start with the worst.

### Some Heartless Mill Owners.

In Greenville, S. C., a nurse employed by one of the mills there told me that a few years ago she had been employed as a visiting nurse in one of the counties of North Georgia. She said there was a small mill in that county run by the meanest man she ever saw. When he was finally forced to acknowledge that there was a difference between the size, general health and appearance of children outside the mill those whose parents worked in the mill, and had acknowledged that this emaciated condition of many of the mill children was probably due to insufficient or improper food, and that the people needed help and instruction in these things, he remarked indifferently, "That's their lookout."

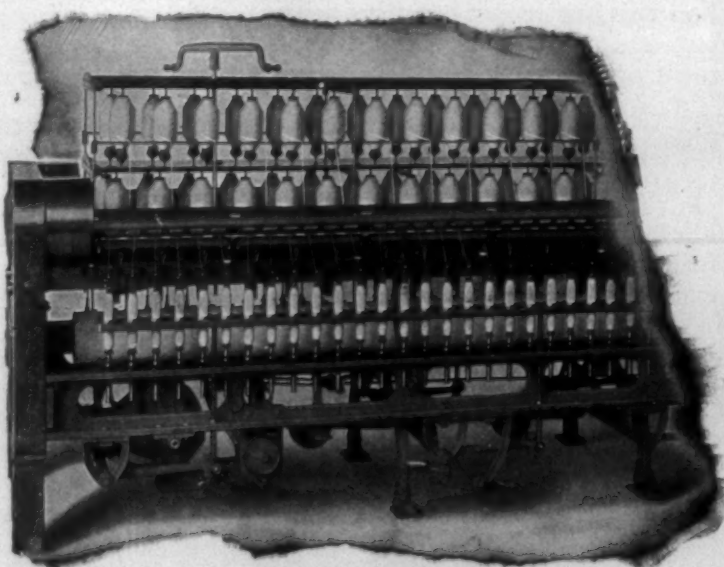
He was the only one of his kind I could learn of, and certainly I did not come across any men who were bold enough to express such views to a writer looking for material for publication, but I did see one mill where I felt that at least a degree of such indifference must exist. It was a small mill on the outskirts of a moderate-sized city. The general manager told me that when he had

(Continued on Page 31)

## H. & B. AMERICAN MACHINE CO.

Pawtucket, R. I.

Southern Office: 814-816 Atlanta Trust Co. Bldg., Atlanta, Ga.



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With Band or Tape Drive

The illustration shows the Head End Section of our New Pattern Spinning Frame, with Improved Builder and Pick Motion. Our machines are of Extra Heavy Construction to withstand high speeds without vibration, thus insuring light running and reduced cost in operation.

We build these machines in all gauges, with either Lever Weighted or Self Weighted Top Rolls.

There are many valuable features embodied in our machines that we would be glad to describe.

Illustrated Bulletin with List of Users sent on Request

## COTTON MACHINERY



## HOUGHTON

# About Houghton's Warp Conditioner

## A truthful sort of a talk

by Chas. F. Carpenter,

Near Editor.

**P**ERSONALLY I never used an ounce of warp conditioner and therefore when I say to you that HOUGHTON'S WARP CONDITIONER is the best on Earth, (and I don't think there is any warp conditioner in Heaven), it is not based upon personal experience, but rather upon evidence which I have insisted should be presented to me, before I would hazard my reputation by making such a statement in print.

Of course, you know and I know that the Houghton Research Staff originates all Houghton Products, but although many members of that Staff are practical mill men, the Houghton Research Staff does not decide as to the quality of its inventions. That is decided by the great Jury of Public Opinion.

When I write the praises of HOUGHTON'S WARP CONDITIONER I do so because of the universal preference,

which seems to be given to it over all others, by all who have given it a fair test.

HOUGHTON'S WARP CONDITIONER is something more than a mere softener. It carries the size and added weight through to the finished fabric, and it adds such strength to the warp that the breakage at the beam is reduced to insignificance.

In considering any product of this sort, it is well to consider:

1. The experience of the manufacturer.
2. The financial responsibility of the manufacturer.

E. F. Houghton & Co. have been manufacturing textile oils since 1865 and their financial responsibility may be obtained through any mercantile agency.

Send for a Houghton Man to talk it over.

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*Oils and Leathers for the Textile Industry*



**A WONDER PRODUCT**  
**"H. P. C."**  
**WARF DRESSING**  
**THE HART PRODUCTS CORPORATION**  
**CONSULTING CHEMISTS & MANUFACTURERS.**  
**NEW YORK, N. Y.**  
**1440 BROADWAY,**

## Practical Discussions

By  
**Practical Men**

### Why Object to Warp Stop Motions.

Editor:

Why are some mills operated without warp stop motions? I understand that some mill men object to their use, and it would be instructive as well as interesting to find out the reason why. Can somebody give us reliable information on this important point. "K. N."

### Weight Variations.

Editor:

How about weighing goods in wet and dry weather, and at the same time have accurate shipping weight? We are experiencing a great deal of variation in our weights. For example, goods that we weighed when it was very wet are now weighing too light, and goods that we have weighed during this exceedingly dry spell, will to heavy, when the weather changes. What is the remedy? Can anybody explain? Shipper.

### Answer to Night Carder.

Editor:

In answer to the inquiry made by "Night Carder" in the Textile Bulletin as to soft roving, I would like to give him a couple of suggestions. I have experienced the same trouble in the past and as far as my knowledge is concerned there is either of two things that he should look into and I feel sure that if he will get those right he will overcome his trouble.

First thing you do, doff a frame and start it back up let it run building the roving to the top of the bobbin and just as soon as it makes its change at the top stop the frame. Examine the laying of the roving on the bobbin and if you can see the bobbin between the layers then put on a smaller lay gear until the flyer lays it so close that you cannot see the bobbin between the layers of roving, but being sure to not let the layers ride each other, then put in more twist if you can stand it, and if you will attend to both of those points correctly I am almost sure that your soft bobbins will be eliminated. I have run a card room more than any other room but I believe in just as much twist in the roving as the rollers of the next process will draft out.

I have heard some good men who know lots more about a card room than I do say to put in just enough twist to keep it from breaking back in the creels in the next process. If you are very careful about that the roving will stretch in the creel and not break back, and when it

stretches in the creel on the spinning frame it will break down in front when the traverse is down, until the frame gets over half full. What is the gain in saving a few dollars a week in the card room by stacking roving in the bins and stopping off on the spinning room on Saturday morning, and losing twice that much on account of the roving running so bad in the spinning, finished production is what counts make it so the next departments can handle it with the lowest possible cost, then you are running your room. I hope this will be some help to "Night Carder" in overcoming his troubles. W. R. B.

### Answer to Shasta.

Editor:

Your question is one which covers a great deal of territory. First, you must ask yourself quite a few questions, and when you have answered your own questions, the other fellow can give you an idea of what settings which may be best for you to start with. But the setting of a card is like a great many other things in a cotton mill. It is regulated by seasoned experience. Experience teaches the carder the best card settings for his special class of work coupled with other local conditions.

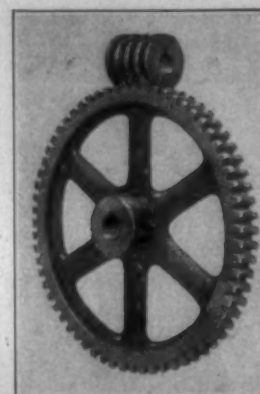
I will give you a list of things which largely governs the settings of cards everywhere:

Dry or damp climate; short or long cotton; dry or damp cotton; slow or fast carding; heavy or light carding; old or new cards; fine or coarse wire; coarse or fine work; new or old clothing; clean or dirty cotton; waste or raw cotton; oiled stock or without oil; clothing tight or loose. Does your mill want good or poor carding? Card wire sharp or dull; wooden stationary top flats or revolving top flats; solid floors or shaky buildings.

I have mentioned over thirty different local conditions. Now what are your local conditions? Everyone of the different local conditions enumerated will affect the setting of a card more or less. You can see for yourself from the above list (which is published for the first time) that it does make a difference. For example where the floors are shaky and the cards are old, it would not be possible to set as closely as where the cards are new and the floors solid.

However on common cotton under average conditions it is always safe to start the cards to the settings about as given below and then to find the better settings for each point according to the results secured. There are really nearly

(Continued on Page 28)



### We Manufacture Gears For All Industrial Purposes

All gears cut on automatic gear generating machines.

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3 pitch 18 inches or smaller.

Worms of all kinds.

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Send drawing or sample gear. Prices on application.

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## MI CLEANSER

It is to be expected that a Scrubbing Powder containing materials of only the finest cleansing, scouring and absorbing qualities will clean **QUICKER and BETTER.**

Yet we do not claim simply greater efficiency, for our direct to the Mill service makes possible an unusually low price.

Write us for a Sample and Prices

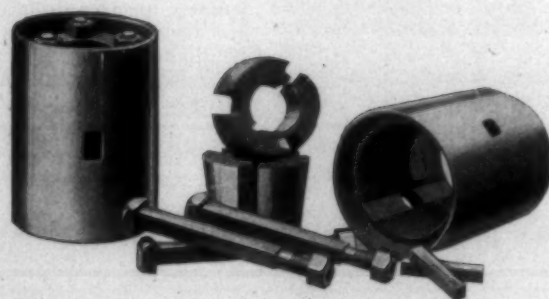
THE DENISON MFG. CO.

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Established 1915



## Shafting Service



Why should you bother with shaft couplings that are almost good when you can so easily and cheaply get Sellers Double Cone Vise Couplings?

**Always Good**

**William Sellers & Company, Incorporated**  
**Philadelphia, Pa.                      Greenville, S. C.**

## Harris and Price Guests of Charlotte Cotton Exchange

**R**ICHARD T. HARRIS, president of the New York Cotton Exchange and Theodore H. Price, editor of Commerce and Finance, one of the best known editors and economists in the country, were honor guests Tuesday night at a dinner tendered them by the Charlotte Cotton Exchange at the Charlotte Country Club. The dinner was presided over by J. H. Cutler, president of the Charlotte Exchange.

Both Mr. Harris and Mr. Price spoke interestingly on several phases of the cotton situation. Mr. Harris devoted the major part of his address to an explanation and a strong defense of the "futures" contract, admitting the difficulties in fixing the terms of contracts, but strongly supporting it as a necessity in cotton trade.

Mr. Price sharply criticized the growing tendency of the government to become more and more paternal in its attitude toward business and attacked both seriously and humorously the situation created by the frequent issuance of the Government cotton reports.

In defending and explaining the futures contract, Mr. Harris pointed out the constantly changing conditions which cannot be ruled by man and which therefore make a contract very difficult to work out. The present contract of the New York Cotton Exchange, he stated, was the result of sincere and earnest endeavors on his own part

and that of the Exchange to make it as near perfect as possible.

Mr. Harris stated that he knew from an experience of 30 years in handling spot cotton that there are many inconsistencies that cannot be eliminated and the "premiums" are inevitable. "I venture to say" he added "that spinners can buy cotton now for delivery next month cheaper than they can for delivery next week," citing circumstances which tend to make this true.

"We have done all we can to put our contract in alignment with spot business" he said. He told of a committee which was formed to solve this problem, saying that Julius Cone and J. E. Latham, both of Greensboro, were members of the committee.

This committee he stated, had but one purpose that being to determine what changes could be made in the contract for the advantage of the "spot" man.

Mr. Harris emphasized the fact that the New York Cotton Exchange is neither a Southern nor a local agency, but must be guided by what is universally for the best. In discussing the "Southern delivery system," Mr. Harris declared that he was heartily in favor of it, but that the committee became convinced that the New York contract could not be based on it because of certain conditions.

"I have reached the conclusion," Mr. Harris asserted, "that the New York contract, if approached with reasonableness and if all of the circumstances are fairly considered, after all it has stood the test fairly well and is the best that can be

made." He pointed out the important feature that had recently been added, that of allowing trading to start on the tenth of the month. He also declared that he believed the so-called "manipulations" had been reduced to a minimum.

### Theodore Price Speaks

At the conclusion of Mr. Harris' remarks, Theodore H. Price, after paying tribute to Mr. Harris for his sincere work on behalf of the South, launched into a severe criticism of the Government bureau activities in the cotton trade. He cited a series of announcements made by Government agencies on consecutive days, each of which had an effect upon the market and which he declared constituted a "reprehensible paternalistic effect that needed a protest from the people."

Mr. Price charged that the attitude of the Government was growing more and more paternal each day. "We should take note of the conditions coming on" he said, "and I hope I can arouse you to an appreciation of the situation." He cited for example the Government crop reports. He said that an obvious remedy for the situation created by the frequency of the cotton reports would be to issue two cotton reports daily and one on Sunday and then the job would be complete.

### October Cotton Exports Large

Washington.—Exports of raw cotton during October were larger than in any month for more than ten years.

The census bureau's monthly report today showed 1,421,482 bales were sent abroad during the last month or almost double the quantity exported in September this year and half million bales more than in October last year.

Not since February 1915, when 1,501,701 bales were sent abroad has so large a quantity of cotton been exported. Reports both in October and November, 1913 exceeded a million and a half bales. Exports for the first three months of the cotton year have totaled 2,489,311 bales compared with 1,961,638 bales in the same period last year. Germany, in the three month period has taken 709,888 bales or more cotton than any other country. This compares with 407,482 for the same period last year. The United Kingdom took 659,808 bales, compared with 627,298 and exports to Japan were 286,476 bales compared with 181,596.

The United Kingdom took the largest quantity in October, a total of 430,967 bales. Germany was second largest importer with 350,888 bales, while Japan took 184,762 bales.

### Dividend By Pacific Mills.

Boston, Mass.—A quarterly dividend of 75 cents per share has been declared payable December 1, 1925, at the New England Trust Company, transfer agents, 135 Devonshire street, Boston, to stockholders of record November 18, 1925, on Pacific Mills stock, according to the official announcement of Edwin Farnham Greene, treasurer, here this afternoon.

# "Industrial" Rayon

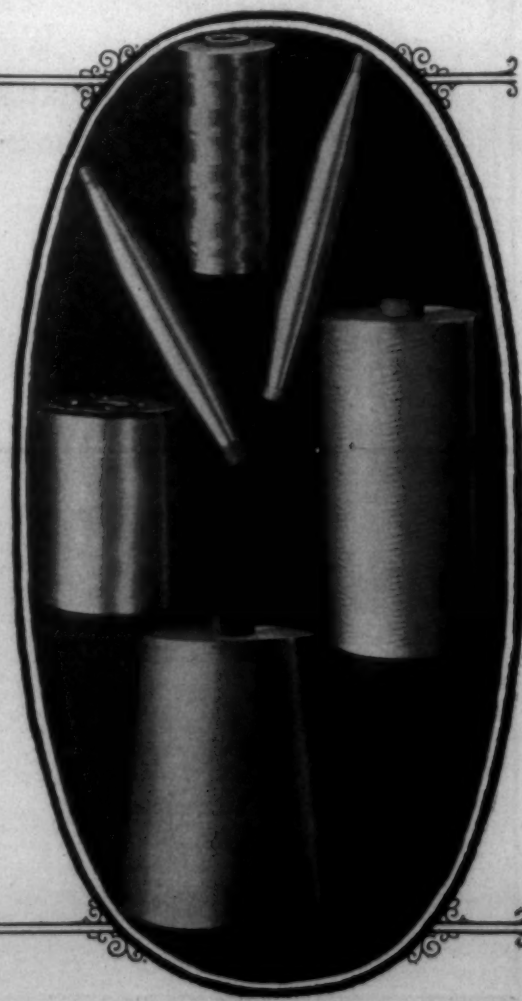
**A**N admirable response to the varied and intensive phases of present-day demand, and forging on toward broader fields of trade usage. Both the weaver and the knitter now secure "Industrial" Yarn in those forms best suited to their immediate needs—some of which are illustrated.

From our own throwing plant deliveries in either dyed or natural state are received in shape for instant weaving or knitting.

*The* INDUSTRIAL FIBRE COMPANY *Inc.*

148 MADISON AVENUE, NEW YORK CITY

Factory: CLEVELAND, OHIO





# MATHIESON Chemicals

## *Quality Is Paramount*

WITH many of the raw materials going into the chemical-consuming industries, market fluctuations are wide and frequent. In such cases the question of price may readily assume in the mind of the buyer an importance out of all proportion to other vital considerations.

This undue emphasis on price may often extend even to those raw materials where market changes are infrequent and small, and where little may be gained by "shopping" for lower quotations. Thus, when the quality and uniformity of the product and the character of the manufacturer should be the prime considerations, price frequently becomes the principal deciding factor. Long-established brand names and records of service may be entirely disregarded for a negligible difference in price.

By rigidly adhering over many years to a uniformly high standard of manufacture, we have built up for our "Eagle Thistle" Brand products an enviable record for quality and uniformity, at the same time establishing a reputation for satisfactory service and equitable business dealings with the consumer. We believe that discriminating buyers are recognizing more than ever before that these are the first things to be considered in selecting a source of supply.

*The* **MATHIESON ALKALI WORKS Inc.**  
250 PARK AVE. NEW YORK CITY  
PHILADELPHIA CHICAGO PROVIDENCE CHARLOTTE

*Caustic Soda ~ Liquid Chlorine  
Bicarbonate of Soda  
Anhydrous Ammonia*



*Soda Ash ~ Bleaching Powder  
Modified Virginia Soda  
Aqua Ammonia*

**Deal Direct with the Manufacturer**



### **A New, Exceptionally Bright and Generally Useful Sulfur Yellow**

**U**NDER the designation, National Sulfur Yellow 2G, we are bringing to the attention of dyers a new type of Sulfur Yellow, distinguished for its excellent solubility, level dyeing, and for its particularly bright and greenish shade, properties that make it useful for all classes of material for which sulfur colors are employed.

Samples and full technical information may be obtained from any of our branches.

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## **NATIONAL DYES**



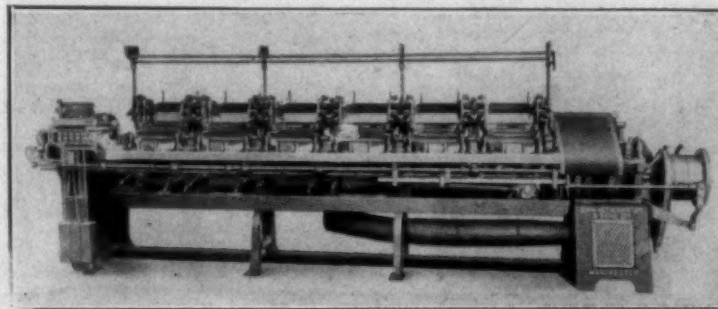
### **The Improved Nasmith Comber**

**T**HE firm of Messrs. John Hetherington were the pioneers in the manufacture of combing machines, and as far back as 1850 commenced to make the original Heilmann. Naturally, during the intervening period they have accumulated much valuable knowledge in relation to combing machinery construction, and added to the obligations of the industry when they introduced the Nasmith—marked advance on the old Heilmann—some 20 years ago. At the present time the firm is very busy making their latest 1925-Model Nasmith comber of 6 and 12 heads. Many important firms in Great Britain, U. S. A., Canada, France, Germany, and other countries have adopted it and testify to the following advantages:—these are greater cleaning power; greater productive power; less waste in the process; and better control over it; less movement of the operative parts; smoother running and greater ac-

cessibility for adjustment and control. that have escaped the cylinder needles. No increase of waste, however, results, because the nipper overtakes the top comb, and they are in normal relation to each other when they arrive at the nearest point to the detaching roller.

(b) Hanging on a different centre to the nipper, the top comb path slightly intersects that of the nipper, and drops deeper into the nipper tuft at its entry. No increase in waste results as the comb is in normal relation to the detaching roller when at its nearest point to the roller.

(c) The comb is at a keener angle at the moment of entry into the tuft, and ensures the instantaneous entry of the tuft into the comb as soon as the detaching roller pulls the tuft taut. No increase of waste results, as the keenness of the angle diminishes as the nippers and top combs swing forward.



**The Nasmith Comber.**

cessibility for adjustment and control.

The following are the salient features of the machine—(1) 6 in. cylinder with 20 rows of needles instead of 5 in. cylinder with 17 rows; (2) nippers which are always in theoretically correct relation to the needles of the cylinder during combing, no matter how the nipper is set in relation to the detaching rollers; (3) top comb: more effective than ever before, because it enters the lap further in front of nipper at a keener angle and penetrates deeper than heretofore.

The above points ensure greater cleaning power.

With regard to production, it is claimed that 15 per cent. to 18 per cent. more production can be obtained with the same weight of lap and same speed, and two per cent. of waste can be gained.

There are three ways of regulating the waste: (1) By alteration of distance between the detaching roller and nipper; (2) by regulation of feed mechanism; (3) by regulation of the time when top comb enters the lap. The top comb is independent of the nipper and swings on its own fixed centre. It rocks in time with the nipper but a shorter distance. The following advantages result from this:—(a) The top comb travels a shorter distance than the nipper and enters further forward in the nipper tuft, which has already been combed by cylinder needles, thus catching some impurities lying close to the nipper

(d) The mean movement of the comb is only a quarter that of the ordinary Nasmith.

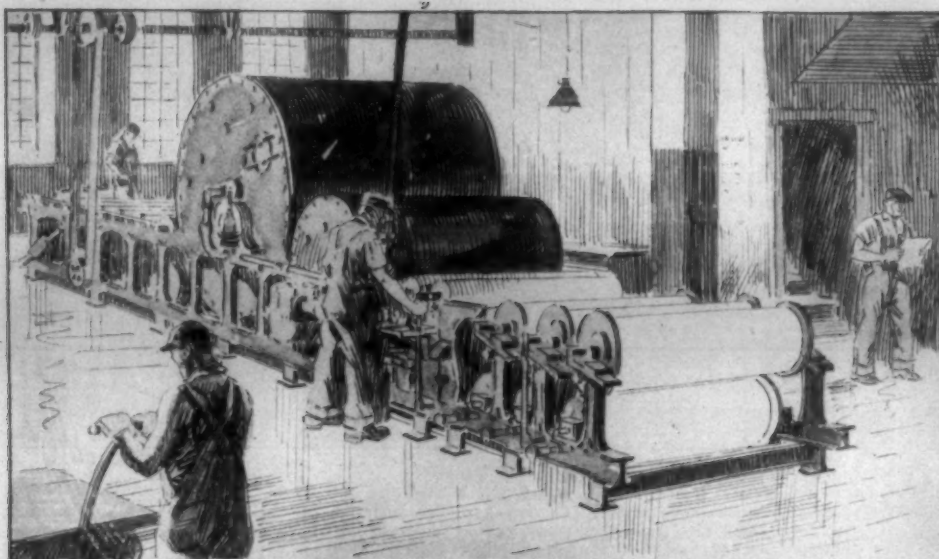
Patent Variable Weighting of the Leather-covered Detaching rollers: There are now no dead weights on the leather rollers, the pressure on them varying from minimum to maximum and back again each stroke. When the rollers commence to back off and whilst reversing, the weight on the rollers is almost nil, and only begins to increase when the rollers are again running forward and detaching has commenced, and the maximum pressure on the rollers is reached at the end of the detaching operation. The following are the chief advantages claimed for this:—(1) The life of leather covering at least trebled; (2) heavier laps can be worked; (3) the strain on the roller driving mechanism when starting and reversing is reduced almost to vanishing point.

The Patented Positive Grip Nipper Feed does away with the ordinary feed roller mechanism and gives the following important advantages:—

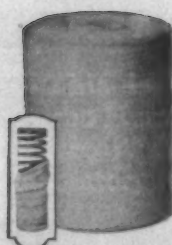
(1) It will grip and feed any weight of lap and short staple just as well as long; (2) it may approach nearer to the nip of the detaching roller for short cotton at the end of detaching than is possible with the feed roller, and consequently, there is no long fibre left 'floating' to be carried away as waste; (3) it effects a saving in waste without any sacrifice of cleanliness.

(Continued on Page 29)





## *Dyed Cotton Yarn Ready for Your Slasher/*



**THE FRANKLIN PACKAGE**  
The spring tube is fully protected  
by patents.

• Use •

**FRANKLIN PROCESS**

*Colored Yarns*

*The Wound Form Dyeing  
Reduces Breakage*

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**S**MALL mills without any, or with limited, warping equipment or large mills temporarily congested in the warping department, should be interested to know that they can purchase dyed yarn from us wound on section beams, any number of ends desired, all ready for the slasher. Or, if customers prefer, we will dye and warp yarn which they furnish.

We spin in our own mill, and carry in stock in large quantities, carded cotton yarns, single and ply, in counts up to 30's. On other counts and qualities we act as yarn merchants if the customer wishes.

Our own yarn is carried in stock on Franklin tubes all ready for the dyeing machine. This fact, combined with exceptional facilities all along the line, enables us to maintain a high average both as to deliveries and as to general service.

We can, of course, as usual, deliver yarn in the Franklin Package form, on paper tubes, cones or jackspools, as well as on section beams.

Address your inquiries to our nearest plant.

**FRANKLIN PROCESS COMPANY**

*Dyers of cotton, woolen, worsted, jute, hemp and linen yarns and silk noils,  
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# FRANKLIN PROCESS

*Commission Dyeing of Yarn in the Wound Form*

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Member of Audit Bureau of Circulations  
Member of Associated Business Papers, Inc.

Published Every Thursday By

**CLARK PUBLISHING COMPANY**  
Offices: 39-41 S. Church St., Charlotte, N. C.

THURSDAY, NOVEMBER 19, 1925

DAVID CLARK  
D. H. HILL, JR.  
JUNIOUS M. SMITH

Managing Editor  
Associate Editor  
Business Manager

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Address all communications and make all drafts, checks and money orders payable to Clark Publishing Company, Charlotte, N. C.

## In New Quarters

WE have completed the removal of the offices of the Clark Publishing Company from 41 South Church street, where they have been located since 1918, to 18 West Fourth street. Our new location is just around the corner of Fourth street from our former quarters.

The Clark Publishing Company and the Washburn Printing Company, both of which are owned by David Clark, now occupy the second floor of the building at 18 West Fourth street, this building having been remodeled and especially arranged for our publication work and for the job printing business of the Washburn Printing Company.

The constant growth of the Southern Textile Bulletin and the steady increase in business being handled by the Washburn Printing Company necessitated larger and more satisfactory quarters which are suitably provided in our new location.

A considerable amount of new equipment has been added to the job printing plant, making it one of the most modern and best equipped in the South.

We have secured a long term lease on our building and expect to make it our permanent home.

## Curtailment

THE Government report on cotton consumption, issued on November 14th, confirmed our recent statement that the amount of actual curtailment had been greatly overestimated.

The consumption of cotton by Southern cotton mills certainly did not look like there had been half time operation.

The truth is that there has been a material improvement in business and a great deal of the talk about

the effect of the curtailment has been the propaganda of buyers who wanted to cover up the real situation and keep prices down.

This has been particularly true in the coarse yarn division where the mill managers are easy to fool and where they think they are committing a sin if they ask for higher prices.

In the coarse yarn division much yarn made from tinges and low grades has been bought and the trick of naming the prices paid for such yarns without stating their quality is being freely used to secure lower prices on white yarns.

The stock of yarns that have been carried by spinning mills for five years has now been wiped out and it would require only a little backbone to advance prices to a profitable basis.

## The Controlling Question

THE question of the approximate size of the 1925 crop is settled and will not have much further influence upon cotton fluctuations.

The great question now is the number of acres that will be planted in 1926, and in spite of all efforts to use other factors as bull or bear arguments, the 1926 acreage will be the controlling factor.

The man who can forecast accurately the 1926 acreage and act accordingly is going to be the man that has the right cotton position.

It is easy to say that there will be no reduction or that there will be some reduction, but the man who is wise will seriously and carefully study the situation.

One of the earliest indications is the sale of mules, and we happen to know that a certain cotton manufacturer is, at a considerable expense, collecting information upon the subject.

Very soon the amount of fertilizer

sales will tell part of the story and there are sources from which the indicated and probable sale of fertilizers can now be learned.

One cotton manufacturer asserted this week that an increased acreage would be planted and that cotton would by May be below 15 cents.

Another cotton manufacturer, a man who is usually conservative, stated that all the bear dope was out and that it would not surprise him to see cotton go to 30 cents.

We do not believe that there is anything upon which to base an opinion and until more is learned about the 1926 acreage we advise a conservative position.

## Textile Research

MARK TWAIN once remarked of the weather that a great deal was said of it but very little was ever done about it. The same thing seems to apply to textile research work in this country. The question bobs up now and then, is discussed at length and then relegated to the background by the more immediate problems of actual plant operation. It seems to be a sort of fugitive problem that no one ever has quite the time to overtake. Beyond a very general agreement that research is not only desirable but actually necessary, the question rests.

Various agencies have from time to time brought up this subject before the textile manufacturers. They have succeeded in raising a wealth of moral support for the idea, but in getting nowhere as far as a concrete program of research is concerned. The average manufacturer is apparently content to give three rousing cheers for research and let it go at that.

Having watched hopefully the various interests in the textile industry who from time to time have sought to get the industry down to brass tacks on the research question, we note with interest the latest campaign advocating the establishment of a Textile Research Institute. It comes outside the industry proper and we hope that the voice of the outsider will find a more attentive ear.

The American Chemical Society has started a movement for a textile research bureau and in doing so rather sharply raps the indifference of American manufacturers. The society's journal cites the valuable work being done in research by the British textile interests and declares that petty jealousies are hindering such work in America.

Among other things, the American Chemical Society says in its plea for textile research:

It may be necessary to await a new generation before a change of attitude may be expected. Some mills are in the hands of those who have inherited them and their owners are satisfied with the present return.

They are not looking far into tomorrow or they would support any well considered plan for a textile research institute in the United States.

Some mills are in the hands of those who by superior intellect and hard work have progressed from spindle boys to owners. They have not had the time or opportunity to become acquainted with

science or to examine its record in other industries.

Chemists know what the science has done for the textile industry. Of the research associations formed in Great Britain by industries with the help of the government, none has been so successful as the Cotton Research Institute.

It is supported by the spinners and weavers of Great Britain. It has devoted attention not alone to spinning, weaving, finishing, dyeing, and other textile problems, but is interested in a problem which, in turn, concerns America—the growth of a supply of fibers for British spindles and looms within the British Empire.

There have been a few opportunities to establish a textile research institute in America, but they have passed, either because of jealousies within the ranks of textile manufacturers or a lack of appreciation.

We hope that the emphasis Great Britain places upon the utilization of science in the textile industry will finally bring home to our industry the necessity of knowing as much about the business as any competitor.

## Publication of the Edmonds Articles

THROUGH the courtesy of the Boston News Bureau and with the permission of the author, Richard Woods Edmonds, of South Norwalk, Conn., we are printing the series of articles, "Why Cotton Mills Are Moving South," which appeared in the Boston News Bureau, Barron's Weekly and the Wall Street Journal.

We recently commented editorially upon these articles and think so highly of them that we are arranging to put them in pamphlet form.

Richard Woods Edmonds is a nephew of Richard H. Edmonds, of the Manufacturers Record, and evidently acquired some of his uncle's ability to think straight and write clearly.

## J. L. Phillips Resigns

J. L. PHILLIPS, who has been subscription solicitor for the Southern Textile Bulletin for about ten years, has resigned to accept a similar position with the American Wool and Cotton Reporter of Boston.

During his term with us Mr. Phillips has been loyal to our interests and a hard worker, and we regret to lose him from our staff. He rendered a full measure of service and his methods of solicitation were always so clean that there was rarely a complaint or a misunderstanding on the part of our subscribers.

W. H. Still, who joined our staff about six months ago, will succeed Mr. Phillips as our regular traveling representative.

## The Pinehurst Meeting

THE cotton manufacturers of North Carolina are looking forward with much pleasure to the coming meeting at the Carolina Hotel at Pinehurst on Friday and Saturday after Thanksgiving.

Many will attend the Carolina-Virginia game at Chapel Hill on Thanksgiving day and go to Pinehurst that night.

Everybody, including the ladies, will take their golf sticks, as there will be the usual long list of prizes.



FRANK B. KENNEY  
President

CLARENCE R. HOWE,  
Vice President

MARSHALL F. CUMMINGS,  
Treasurer

# T. C. Entwistle Company

Lowell, Massachusetts, U. S. A.

*Designers and Builders*

## Warping and Beaming Machinery

High Speed Warpers,

Silk (Rayon) Warpers,

Slasher Warpers,

Ball Warpers,

Automatic Lint Cleaners,

Indicating Clocks,

Balling Machines,

Beaming Machines,

Expansion Combs,

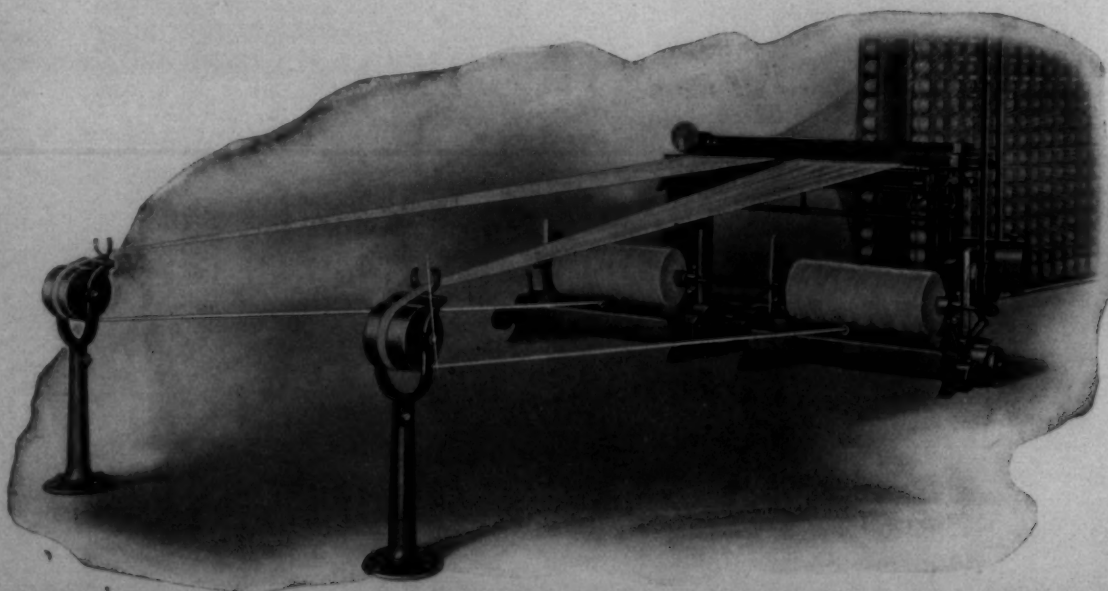
Warper Creels,

Doubling Machines,

Card Grinders,

Section Beams,

Wood Rolls,



Double B all Warper

It will pay you well to  
purchase ENTWIS-  
TLE WARPERS.  
You can't lose when  
you buy the Best  
there is, at no greater  
cost.

Send for  
OUR COMPLETE  
CATALOG

# Fixing Looms Made Easy

By the use of repair parts made by the Loom  
Manufacturer.

Time lost in fitting loom repair parts made in  
local foundries reduces production in the Weave  
Room, increases costs and handicaps the  
Loomfixer.

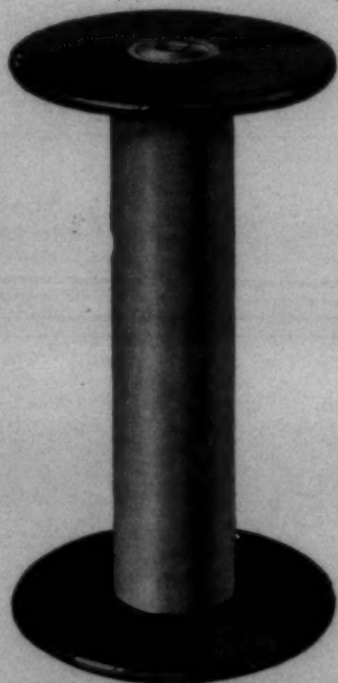
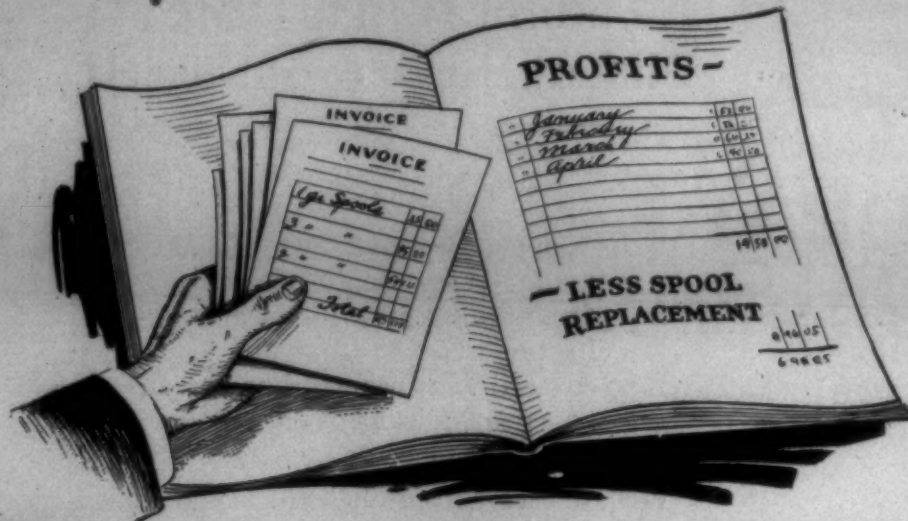
Draper repair parts fit Northrop Looms and are  
the Loomfixer's best friend.

## DRAPER CORPORATION

Southern Office Atlanta Georgia

Hopedale Massachusetts





**Lestershire Vulcanized Fibre Spools**

Eliminate your spool replacement expense.  
Eliminate loss of yarn due to spools (in many mills this loss runs into thousands of dollars).  
Eliminate all possibility of injury to employees from rough or splintered spools.  
Increase about 10% the yardage on your spools.  
Eliminate spooler kinks and knots due to spools.  
Eliminate broken ends on your warpers due to spools and thus increase warper production 20% to 30%.  
Materially improve the quality of your warps; And thus better the quality and increase the production in your weave room.

*Replace with Lestershire Spools—  
then forget them for years*

**Y**OU are replacing ordinary wooden spools every few years—replacing profits with a receipted bill for spool shipments. Why not settle the spool question for a good many years—the life of your machines? \*

Lestershire Vulcanized Fibre Spools give these unparalleled results. They are the most economical spools you can install. On the one hand they eliminate waste of yarn and frequent spool replacements; on the direct profit side they increase the quality and quantity of your production.

Lestershire Vulcanized Fibre Spools cannot splinter, wear rough or break. Their enduring qualities give them long life; when you make them standard equipment you are freed from the expense of spool replacements.



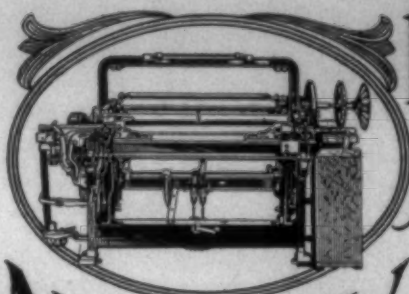
**Warper Spools for  
Immediate Delivery**

In order to give those of our customers who use standard sized Warper Spools the benefit of immediate deliveries, we endeavor to carry on hand for quick shipment a stock of 4x5, 4x5½, 4x6 and 4x6½ spools.

Satisfaction Guaranteed

**LESTERSHIRE SPOOL & MFG. CO.**

Southern Office:  
519 Johnson Building  
Charlotte, N. C.



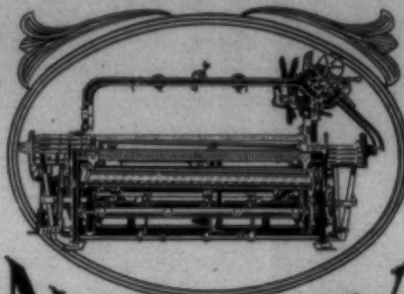
## NORDRAY LOOMS

for Cotton,  
Silk, Rayon,  
Worsted,  
Wool,  
Linen,  
Jute,  
Automatic,  
Plain,  
High Speed,  
Box Type  
Gingham

# HOPEDALE

## MANUFACTURING COMPANY

Milford, Mass. & Greenville, S.C.



## NORDRAY LOOM ATTACHMENTS

Filling Changers  
Feelers  
Warp-Stops  
Drop-Wires  
Temples  
Dobbies  
Positive Head Motions  
Drop Boxes  
Multipliers  
Leno  
Marquissette  
Centre-Forks

"Suppose we said,—“Our loom is made from materials mined from the greatest mines and cut in the greatest forests. It is covered with beautiful paint. It has gears; it has bolts; it has washers; what more do you want?”

Well, if I were a purchaser, I would want a lot more, I would want to know its weight and its structural strength; I would want to know whether it was simple in design and shy on repairs; I would want to know whether it had corrected old faults of catching bobbins, bending drop-wires, wearing out rocker-shafts.”

—Textrin Themes

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ESTABLISHED 1866

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Southern Branch Factory

Southern Branch Office

E. M. TERRYBERRY, Southern Agent

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Cylinder and  
Doffer Fillets  
Napper Clothing

Stripper and  
Burnisher Fillets  
Emery Fillets

Top Flats and Lickerins Recovered and  
Promptly Returned

Tempered Steel Twin and Domestic Iron Wire Heddles  
The Best Materials Obtainable Make Up Our Products

Give us a trial on Cylinder and Doffer Fillets. This  
will satisfy you as to the merits of our Card Clothing.



## Personal News

J. W. Shiver is now night overseer of spinning at the Manville-Jenckes Company, High Shoals, N. C.

W. E. Mason, president of the Franklin Mills, Greer, S. C., is in New York on business this week.

H. A. Schmidt has resigned as overseer of spinning at the Maginnis Mills, New Orleans, La.

Chas. R. Roberts has become overseer of carding at the Hampton Mills No. 4, Hampton, Ga.

T. W. Webster has become overseer spinning at the Manville-Jenckes Company, High Shoals, N. C.

Sam Miller has been promoted from general card room man to second hand in night carding at the Spindale Cotton Mills, Spindale, N. C.

J. P. Laurens has resigned his position with the Dunean Mills, Greenville, S. C., and is now with the Cramerton Mills, Cramerton, N. C.

T. W. Simmons has resigned as second hand in spinning at the Monaghan plant of the Victor-Monaghan Company, Greenville, S. C.

H. C. Campbell has been promoted to second hand in spinning at Monaghan plant of the Victor-Monaghan Company, Greenville, S. C.

F. D. Gowan has resigned as superintendent of the Franklin Mills, Greer, S. C., to take effect December 1.

B. L. Pasour is now assistant overseer spooling, warping and twisting at the Manville-Jenckes Company, High Shoals, N. C.

R. E. Starnes is superintendent of the Alsace Mills, Mount Holly, N. C., and not N. P. Bumgarner, as recently reported through error.

Chas. H. Goodroe has resigned as superintendent of the Hampton Mills No. 4 and 2, Hampton, Ga., and accepted a similar position at the Acworth Mills, Acworth, Ga.

W. C. Bradley, president of the Eagle and Phenix Mills, Columbus, Ga., has been appointed to the board of trustees of the University of Georgia.

J. R. Plunkett, superintendent of the Ensign Mills, Forsyth, Ga., will also have charge of the Hampton Cotton Mills, Hampton, Ga., which were recently purchased by the Ensign Mills.

C. D. Stowe has resigned as second hand in spinning at the Monaghan Mills, Greenville, S. C., to become night overseer of spinning at the Apalache plant of the same company, Arlington, S. C.

E. W. Heaton has resigned as overseer of night spinning at the Dunean Mills, Greenville, S. C., to become second hand in spinning on the day run at the Monaghan plant of the Victor-Monaghan Company.

R. P. Clark, general superintendent of the Standard-Thatcher-Coosa Company, Chattanooga, Tenn., is on a business trip to Philadelphia.

E. W. Edwards, formerly superintendent of the Patterson Mills, Roanoke Rapids, N. C., has accepted a similar position at the new Erwin Mill No. 5, Roanoke Rapids, N. C.

D. R. Hinkle has resigned as superintendent of the Cedartown Cotton and Export Co., Cedartown, Ga., and is now located in Lakeland, Fla.

W. H. Brown has resigned his position with the Cramerton Mills, Cramerton, N. C., and accepted a place with the Louisville Textile Corp., Louisville, Ky.

W. L. Griffin for the past 5 years second hand in spinning at the Greenville Cotton Mills, Greenville, N. C., has accepted a similar position with the Wilson Cotton Mills, Wilson, N. C.

J. P. Eller, who recently resigned as overseer weaving at the County Moore Mills, Hemp, N. C., has become night overseer weaving at the Hillcrest Silk Mills, High Point, N. C.

Capt. P. A. Smith, superintendent of the cotton department of the Pacific Mills, Lyman, S. C., has been elected to membership in the Society of American Military Engineers.

C. L. Garner has resigned as overseer of spinning, winding, spooling and twisting at the Patterson Mills, Roanoke Rapids, N. C., and accepted a similar position at the new Erwin Mills No. 5, Duke, N. C.

W. R. Barnette has resigned his position with Hermitage Mills, Camden, S. C., to become assistant in charge of night work at the Thomaston, Peerless and Aldora Mills, at Thomaston and Barnesville, Ga.

J. T. Campbell has been transferred from second hand in spinning to overseer of the new Barber-Colman spooling and warping department at the Monaghan plant of the Victor-Monaghan Company, Greenville, S. C.

J. M. Hancock has been transferred from Southern district manager of the Hyatt Roller Bearing Company, with headquarters in Charlotte, to the home office of the Hyatt Roller Bearing Company, Newark, N. J., where he will be in charge of sales for the textile division of the company. He is succeeded in the Southern offices by L. E. Mulloney. Mr. Mulloney was formerly agent for a large New England mill, but more recently in charge of the engineering department of a well known textile machinery firm. He is a practical textile man who is well equipped for his new duties.

## Bobbins and Spools

Particular attention given to  
All Types Of Warp  
Bobbins For Filling Wind  
Samples of such bobbins gladly  
furnished

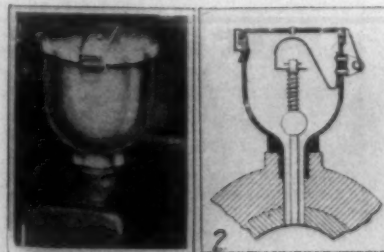
The Dana S. Courtney Co.  
Chicopee, Mass.

A. B. CARTER, Southern Agt, Gastonia, N. C.

Drip,  
Splash!  
Drip  
Goodbye, Profits!

Wasted Oil—Spoiled Goods—Damaged Belts

When an oil-lubricated bearing stops motion, the heat generated from the bearing often causes a certain amount of oil to flood and overflow, resulting in costly damage to good, belts and floors. But where



The  
Knorr  
Lubricator

is used and a non-fluid oil or grease employed, stopped motion means instantaneous cessation of feed and no damaging oil drip.

The simple, patented construction of the Knorr Lubricator insures "the minimum amount of lubricant properly applied."

Write for sample and helpful pamphlet on lubrication.

Malcolm H. Smith Co., Inc.  
50 Congress St. Boston, Mass.



# MILL NEWS ITEMS OF INTEREST

**Atlanta, Ga.**—It is understood that the Fulton Bag and Cotton Mills will erect a large addition to their mill here.

**Piedmont, S. C.**—Fire in the warehouse of the Piedmont Manufacturing Company, damaged more than 500 bales of cotton.

**Burlington, N. C.**—The Southern Art Silk Bleach and Dye Works have recently installed 10 Easton and Burnham spoolers and two 100-spindle Foster cone winders.

**Spartanburg, S. C.**—H. Arthur Ligon, president of the Arcadia Mills, Spartanburg, has been elected president of the Mills Mills, of this city. He succeeds his father, the late Dr. H. A. Ligon.

**Gadsden, Ala.**—The United Overall Company has broken ground for another factory, which will double its present output of 1,000 pairs of overalls per week. The building will be 50x100 feet, two stories high, and of brick construction.

**Gastonia, N. C.**—The Gastonia Weaving Company, which was organized here in the spring is producing narrow cotton and silk fabrics for labels and similar purposes. The company has 30 looms. Julius M. Reis is president.

**Danville, Va.**—It is reported that the Dan River Silk Mills, of 15 East 32nd street, New York City, are having plans prepared by Heard and Chesterman, local architects, for the erection of a two-story building here.

**Winchester, Va.**—The Arthur G. Jones Woolen Mills have let contract for the building of a large dye-house, concrete and steel construction and are also having plans made for a large addition to house additional equipment, and boiler house.

**Vinton, Va.**—It is understood here that the Roanoke Knitting Mills, of Roanoke, has secured a building here and will remodel and equip it for the manufacture of knit underwear. J. Ernest Jamieson, 618 Elm street, Roanoke, is secretary.

**Stony Point, N. C.**—The Rocky Face Spinning Company was sold at the receiver's sale for \$95,000. The purchasers were Saunders, Orr and Co., of Charlotte, D. M. Ausley, H. T. Steele and J. E. Sloop, of Statesville, and A. L. Watts, of Stony Point. It is not known yet whether the sale will be confirmed.

The property consists of a mill having a few more than 6,000 spindles, 17 acres of land, 32 tenant houses and two dwelling houses, all in connection with the mill, and 125 acres of land on the river with a water power.

**Shannon, Ga.**—It is expected that the new Southern plant of the Brighton Mills, under construction will be completed and in operation by April. J. E. Sirrine & Company, Greenville, are the engineers.

**Pendergast, Tenn.**—The Southern Cotton Mills Company, which purchased the Pendergast Cotton Mills some weeks ago, have installed 42 new cards, and additional speeders and intermediates.

**Granite Falls, N. C.**—Excavation work on the new mill at this place is already under way. This plant will manufacture mops from the cordage waste. A side-track has been extended to the mill site for the unloading of materials and equipment. The mill, it is said, will be the largest of its kind in the United States.

**Greenville, S. C.**—A 5 per cent dividend will be paid January 1 by the Mills Mill of this city, that action having been authorized at a recent meeting of the board of directors. At that time H. A. Ligon, Jr., was elected president, succeeding his father, the late Dr. H. A. Ligon. Mr. Ligon will also be treasurer of the mill. At the same meeting Leroy A. Werts, the secretary and assistant treasurer, was added to the board of directors.

**Newberry, S. C.**—Since the recent rains the situation in the industrial circles in Newberry is somewhat relieved, and the mills are beginning to work full time.

Newberry Mills resumed full time operation last Monday, Molohon Mills resumed full time operation Tuesday, Nov. 4, and it is expected that Oakland Mill will begin a full week operation at an early date. This mill has been running only three days per week, on account of the long continued drouth, which affected the water supply, and made it necessary to curtail.

The electric power for mills in Newberry, including parts of the Newberry Mill, and a part of the Molohon, is furnished by the Southern Power Co., of Great Falls, Chester county.

**Luray, S. C.**—A cotton mill is to be erected here in the near future, or as soon as a site can be secured and power arranged for. L. E. Hanna, of Gifford, is the chief instigator of this new business.

The Public Service Co., at first intended to run only a 1,700-volt line through this section, but after the new company decided to form, it was decided to run a 4,400-volt line, furnishing ample power for this or any other industry which may locate in this section.

The new company will be a corporation, and it is reported on good authority that \$25,000 worth of stock has already been sold.

**Morganton, W. Va.**—With the arrival of four carloads of machinery from Gloversville, N. Y., and installation of a part of it, operation of the Tryon Silk Fabrics, Inc., plant on the Sabraton road is expected to get under way within a short time. The mechanical equipment is being installed rapidly and officials of the company here are hopeful of operation within the next few weeks.

The plant itself has been finished for several weeks and arrival of the machinery was awaited, labor at the

## THE FARISH COMPANY

COMMISSION MERCHANTS

100 WORTH STREET  
NEW YORK

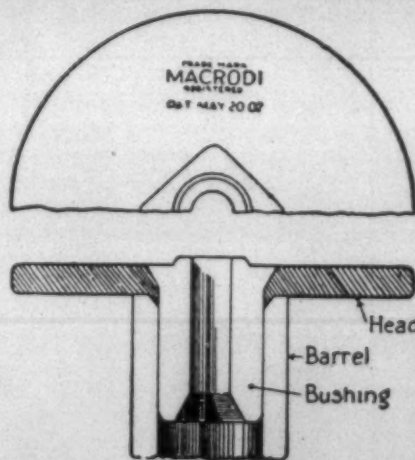
## Meeting the Demand

Much is demanded from dye-house equipment. The destructive action of live steam, acids and alkalis must be successfully withstood or efficiency and profits disappear like mist before the sun.

For ten, twenty, thirty and more years Klauder-Weldon machines have functioned efficiently and produced profits under the most exacting conditions.

Write for Illustrated Literature

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Originals • Pioneers • Leaders  
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## The Macrodi WARP SPOOL FIBRE HEAD

after fourteen years of the hardest mill use has demonstrated that it is

### Durable—Economical

Write for particulars of the added traverse with corresponding increase in yardage—an important feature of this spool

Prompt deliveries in two to three weeks after receipt of order.

MACRODI FIBRE CO.  
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Complete Topographic Surveys  
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Supervision of Landscape and Engineering Construction  
Sewer and Water Development

Largest Landscape Organization in the South



mill being laid off for several days during its transportation from Gloversville to Morganton.

**Chattanooga, Tenn.**—The deal for the exchange of plants between the Smith Hosiery Mills and the Moore-Merritt Rubber Co., which has been underway for several weeks, was closed here Saturday. The rubber company has gone out of business and the Miller Investment Co. exchanged the present Smith Hosiery Mills building for the fine concrete structure formerly used by the rubber concern. An account of the negotiations appeared in these columns.

Of more interest than the property exchange is the official announcement that the Smith Mills will enter the women's full-fashioned field and that it will spend over \$100,000 immediately for full-fashion machines. The company will continue to produce its present brands of women's silk hose simply adding the full-fashioned department when it moves into its new quarters. The Moore-Merritt Co. plans to remodel the old Smith plans into retail stores. It is well located in a rapidly growing business section.

**G. G. Slaughter to Handle Rayon Machinery.**

G. G. Slaughter, one of the best known machinery men in the South, has resigned as president of the Charlotte Leather Belting Company, and Southern sales manager for the Alexander Belting Company, in order to handle a complete line of rayon and silk machinery.

Mr. Slaughter is now Southern agent for the Max Ams Chemical Engineering Corporation, Bridgeport, Conn., makers of artificial silk machinery and accessories and complete laboratory units for producing artificial silk; Charles B. Johnson, Paterson, N. J., manufacturers of slashing and sizing machinery; the Sipp Machine Co., Paterson, N. J., manufacturers of winders, quillers, Raschol warpers and other silk machinery. In addition, he will handle a complete line of equipment for dyeing, drying and tentering silk and artificial silk.

Mr. Slaughter has secured offices in the Johnston Building, Charlotte, and will serve all of the Southern

**Joseph L. Davidson Co.**

Established 1889

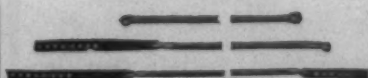
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FOR ALL TEXTILE FABRICS

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LOOM LEATHERS**

Highest Grade Oak Tanned  
For Cotton, Wool and Silk Looms

Check Straps,  
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Hold-ups,  
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**The Druid Oak Belting Co., Inc.**  
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**M E R R O W I N G**

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Stocking Welting  
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Maximum Production  
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Unexcelled Quality of Work

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That's just the way you'll feel when Westinghouse has finished servicing your motors and other electrical apparatus. No more worry—no more trouble—just plain ordinary satisfaction in knowing that the job was done right and by someone who knows his business.

That's what they call the satisfaction of certainty—certainty in knowing that when you call upon Westinghouse to service your electrical equipment you won't need to wonder whether the job will be done right—you know it will.

We are proud of the fact that our Service Shops at Charlotte and Atlanta are always busy with the work of customers who want to feel the satisfaction of certainty. Are you one of them?

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210 E. Sixth St. Charlotte, N. C. 426 Marietta St., Atlanta, Ga.

**Reliable Humidifying Devices**

Since 1888  
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**Better Textile Dryers**  
Manufactured by GRINNELL COMPANY, Inc.

**AMERICAN MOISTENING COMPANY**

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Charlotte  
North Carolina

territory. In addition to the actual handling of silk and rayon machinery, he has completed arrangements for offering to the mills a complete and expert service in connection with manufacture and processing of silk and rayon. He will be glad to furnish any mill in the South the service of an expert to advise them on any problem in handling silk or rayon.

**North Carolina Association Meeting**

Approximately 300 North Carolina cotton mill executives and their guests are expected to attend the convention of the North Carolina Cotton Manufacturers' Association at Pinehurst November 27-28. A group from Charlotte including Hunter Marshall, Jr., secretary of the association, will be present.

Edward J. Cattell, of Philadelphia, humorist, author and editor, will be the principal speaker of the meeting. Mr. Cattell was heard by the American Cotton Manufacturers' Association in Richmond several years ago, and the impression he made there induced the Carolina cotton men to secure him for the Pinehurst gathering. He will speak at the banquet Friday night.

**McLean is Expected.**

Among the guests of honor at the convention will be Governor Angus W. McLean, of Raleigh, W. J. Veen, of Moultrie, Ga., president of the American Cotton Manufacturers' Association; J. C. Evans, of Spartanburg, S. C., president of the South Carolina Association; George S. Harris, of Atlanta, Ga., president of the Georgia Association; and Dr. E. C. Brooks, president of North Carolina State College, at Raleigh. These guests are not scheduled for addresses but it was indicated that they will be called upon to speak.

Friday morning, November 27, will be given over to arrival and registration of the members. A golf tournament will be held in the afternoon. W. H. Williard, of Charlotte, will be in charge of the tournament. The banquet will be held Friday night at the Carolina Hotel.

The business session of the meeting will be held Saturday morning. Reports of various committees and the officers of the Association will be read.

**WELL DRILLING AND DEEP WELL PUMPS**

We do the engineering, and have had 32 years experience solving water problems satisfactorily for textile mills.

**SYDNOR PUMP & WELL CO., Inc.**  
Richmond, Va.

**Save in freight by using**

**W I L T S**

Veneer Packing Cases

They are lighter and stronger, made of perfect 3-ply Veneer Packing Case Shocks. A saving of 20 to 30 pounds in freight on every shipment because of extreme lightness. Stronger than inch boards, burglarproof, waterproof and clean. Write for prices and samples. Convincing prices—Quick service.  
**Wilts Veneer Co., Richmond, Va.**

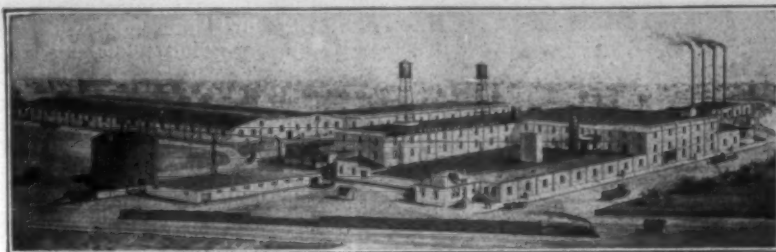
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**"COLUMBUS TAPE"**

GEORGIA WEBBING &amp; TAPE CO.

COLUMBUS, GA.

**VICTOR MILL STARCH – The Weaver's Friend**

It boils thin, penetrates the warps and carries the weight into cloth. It means good running work, satisfied help and one hundred per cent production.

We are in a position now to offer prompt shipments.

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Manufacturers of

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BOBBINS  
SPOOLS  
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**DAVID BROWN COMPANY**

Lawrence, Mass.

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**AUTOMATIC SHUTTLES**

Our Automatic Shuttles are giving Perfect Satisfaction in Leading Mills throughout the country on all classes of work



### Textile School Wins Blue Ribbon at Fair.

North Carolina State College Textile School won the blue ribbon for having the best display of its kind at the annual North Carolina State Fair held in Raleigh.

The display was made up of over 100 different fabrics, all of which were designed and woven by the students in the Textile School. These fabrics contained plain weaves, dobby weaves with rayon, lenos and jacquard designs. Also, there was an assortment of silk, wool and cotton hose from the knitting department; cotton yarn showing the steps of manufacture from raw cotton to finished yarn, and a vari-colored display of rayon, silk and cotton from the dyeing department.

As a souvenir of the Fair the visitors were given a woven photograph of Dr. E. C. Brooks, president of the North Carolina State College. This photograph was designed and woven on a jacquard loom by a student of last year's Senior class.

A woven picture of Dr. E. C. Brooks will be sent to any person requesting same from the Textile School.

### Chemists Outstrip Nature's Coloring

An interesting discussion of the chemist's and dyer's part in the "making" of rayon is contained in a statement from Dr. Edwin E. Slossom, director of Science Service, Washington, who said: "The chemist is never content till he can do something that his teacher can't. In the field of fabrics he has made dyes more brilliant than any to be found in the three kingdoms of nature, animal, vegetable and mineral, and now he is inventing new textiles to tint with them.

"He beat the indigo plant on its own ground and carried off the blue ribbon. He challenged a snail to a race, the Mediterranean mollusk that produced the royal purple of the ancients and beat him, for now the chemist is making a better dye out of coal tar and making it so cheap that anybody can afford it.

"Now the chemist is engaged in another competition. His rival this time is a worm. He challenged the champion spinner of the world, one who has for over 4,000 years held the prize for the finest and most lustrous fiber, the silkworm.

"The worm chews up mulberry leaves and spins out through his mouth a silk thread 500 yards long. The chemist grinds up logs of wood and spins out by means of his mechanical spinnerets a silky thread as long as he likes, for the machines run day and night and all the week long, throughout the year.

"And the thread the chemist

makes is more uniform in size and substance, for the worm, although he was practicing the spinning art thousands of years before man appeared upon the earth, has never yet learned how to produce a perfectly smooth and even filament.

"Not long ago I had a chance to inspect a rayon plant and it was fascinating to watch the process. At one end of the factory spruce logs are floated in. At the other end skeins of glossy yarn are being shipped out. The wood pulp costs about 5 cents a pound, and the synthetic silk sells for \$2 a pound, and more than that when you buy it in the form of neckties, shirts, sweaters and stockings.

"And you buy it oftener than you think you do, even if you prefer to patronize worms rather than men. For nearly two-thirds of what seems to you silk comes nowadays from chemistry instead of the cocoon."

### New Du Pont Dye.

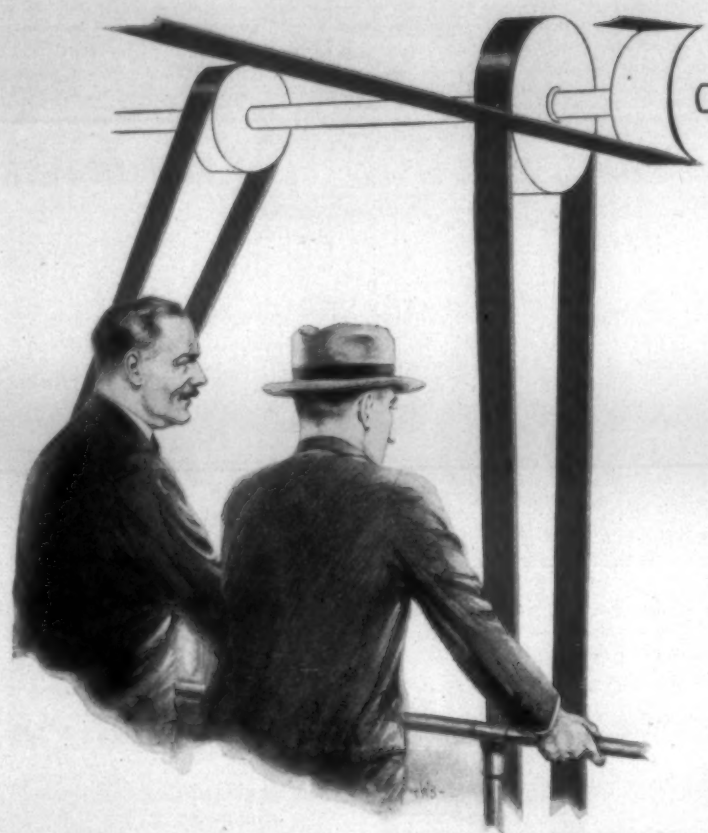
The dyestuffs department of E. I. du Pont de Nemours & Co. announce the addition to their line of chrome blacks, of Du Pont Alizarine Blue Black B, the most characteristic property of which is its excellent fastness to light, even in very delicate shades.

In addition, it is very soluble and dyes very evenly and penetrates well, consequently its chief use is for grays, light blues, etc., on men's wear materials of various types.

It has the usual very good fastness qualities of the chrome colors, and can be applied by either the top chrome, bottom chrome, or chromatic process with good results, although for most purposes, it gives the best results by either bottom chrome or chromate method.

### Arthur H. Ligon, Jr.

Arthur H. Ligon, Jr., was yesterday elected president of Arcadia Mills, succeeding his father, whose death occurred a few weeks ago. He will carry to that position an experience of several years' connection with the properties under the instructions of his capable father, the founder and the builder of Arcadia Mills, and a capacity quite generally recognized in manufacturing circles. He will no doubt be the youngest mill president in the South, but there is no lack of confidence in his ability to direct the operations of the big plant successfully. In the elevation of Mr. Ligon to the presidency of Arcadia, Spartanburg is demonstrating its ability to raise its own mill presidents—a fact that has its significance in the development of the South as a manufacturing region. — Spartanburg Herald.



"Here's a veteran that's saved us lots of money . . it's John's old test belt."

"JOHN was always crabbing about belting. Claimed he needed standardized leather belting to get the right belt for the right job.

"He kept it up until we finally let him try out the idea on this one machine . . . always a terror to belt. He put this belt on. It was the one standardized for the work and it walked away with it. More speed, better finished work and no more belt trouble. This test belt sold us and now our belting is standardized all through the plant."

Graton & Knight are the originators and sole makers of Standardized Leather Belting—belts that guarantee you two things. First, live, pulley-hugging, long-wearing leather, tanned from selected packer steer hides in our

own tanneries. Second, belts that are standardized for their own particular work—each one has the pliability, strength and thickness to get the most out of the machine it is designed to drive.

There are Graton & Knight Belts standardized for every drive in your plant. Our position as the largest tanners and users of belting leather in the world—plus controlled, standardized production—makes our prices, quality for quality, 5 to 10 per cent lower than the field.

No matter how much or how little belting you use, the coupon below will save you money. Send it in today and get definite recommendations for cutting belting costs on over two hundred types of machines in fourteen different industries.



## GRATON & KNIGHT

Standardized  
LEATHER BELTING

MAIL ME TODAY

THE GRATON & KNIGHT MFG. CO., Worcester, Mass., U. S. A.  
Send belt information: 101-Q  
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Company \_\_\_\_\_  
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Prices, quality for quality, 5 to 10% lower than the field  
Tanners—makers of belts, straps, packings, fan belts, lace leather, etc.

### EMMONS LOOM HARNESS COMPANY

The Largest Manufacturers of Loom Harness and Reeds in America

#### Loom Harness and Reeds

Slasher and Striking Combs, Warps and Leice Reeds,  
Beamer and Dresser Hecks, Mending Eyes, Jacquard  
Heddles

LAWRENCE, MASS.



### PERKINS Practical Brush



## Scrubs and Sweeps—

Because they enable textile mills to save greatly on the cost of labor and materials, Perkins Practical Scrubs and Sweeps have replaced brooms and other floor cleaning implements wherever they have been introduced.

One man, with a Perkins Practical Floor Sweep, can do three times the work of the same man using a broom. One of our floor sweeps will outlast four brooms.

Our scrubbing brushes are designed to reach every part of the floor, every nook and corner of the building.

### Every Sweep is Guaranteed!

Behind every sweep and scrub made by the Atlanta Brush Company is our absolute guarantee that it is perfectly made and will render satisfactory service.

This same guarantee stands back of every brush we make.

Incidentally, we manufacture over 90% of all brushes used in Southern textile mills. Write for prices.

**ATLANTA BRUSH CO.**  
ATLANTA, GA.

### Guaranteed Textile Brushes



## "The Proof of the Pudding"



If the proof of the pudding is in the eating, then the proof of the Ring Traveler is in the running. We want you to test out Victors for yourself.

Send for a supply of FREE samples sufficient to set up your frames and make a test. No obligation whatever. Write today.

### VICTOR RING TRAVELER COMPANY

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Southern Agent  
A. B. CARTER

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615 Third National Bank Bldg.  
Gastonia, N. C.

## Practical Discussions

(Continued from Page 19)

thirty different points to set on a card—depending upon the experience of the carder. For example, some carders set their top flats all alike. Another sets them at three or four different points to a different gauge. It is the same way with mote knives, screens, etc.

Try these settings to start:

Doffer to cylinder 7/1000; licker-in to cylinder, 10/000; back plate to cylinder, 34/1000; feed plate to licker-in, 10/1000; licker-in to feed-roll, 34/1000; flats to cylinder, 10/1000, and gradually open to front; comb to doffer, 10/1000; comb to top flats, 10 to 12/1000; screen to cylinder, 20/1000 at the back and gradually open to 68/1000 at the front; back plate to cylinder, 34/1000.

Above are given some of the more important points and safe settings with which to start. Your stopping point or final settings will be born of experience, as no rules given can cover all cases. Local conditions must be studied and worked upon by a trusted competent carder. The longer the carder stays the better he knows how to handle the local conditions. This is why a new carder is so much "up against it." When starting on a new job unless he knows the game. Here is another peculiarity. Sometimes a certain card for some apparently unknown reason must be set differently than the rest of the cards in the same line and on the same work. This may be on account of an overhead belt, belt hole, window, or some air current or electrical disturbance at that particular point.

Verily the path of the carder is not always strewn with roses. Sometimes he must split the difference between one fibre and another fibre in order to get a good working setting. And if the carder comes around and finds all of the fibres standing on end and each one carrying a sword, he's got to make up his mind rapidly as to how he is going to barricade himself against the fight by adapting a different setting.

Lay aside your hammer and tongs and carry a good set of gauges with you.

H. D. M.

### Answer to Progressive.

Editor:

You have progressive ideas all right. The limit of speed is really not on the spindle itself. The spindle as made to-day could easily be operated at a higher rate of speed. It could possibly reach a speed of 15,000 to 20,000 R. P. M. And there is already a ball bearing spindle invented which has never yet been generally adopted. This spindle has practically no limit of speed. It probably could be speeded at 30 to 50,000 R. P. M. But the reason why cotton manufacturers are not much concerned about a higher speed for the present spindles in use, and less interested in the new ball bearing spindle with its higher cost, and the extra cost of installation, etc., is because the rest of the spinning frame has not kept pace with progress of the spindle. To run at a much high-

er speed, the cylinder bearings, roller bearings, gear heads, would have to be all ball bearing equipped. Then another problem comes up, and that is the ring traveler running on the dead surface of the ring. There is a ball bearing ring. But the traverse itself has never been so improved as to run on wheels or ball bearings. When no traveler is used, then the friction of the yarn on the cap over the top of the spindle and which must enclose the bobbin, becomes serious. Lastly, the question of taking care of the ends as they break would be the most serious problem. But this can be overcome by using automatic stop-motions to stop the roving from feeding in when an end broke. There is no doubt that some means will be found to develop the speed of spinnings frames so that they can be operated at double or triple the speed of the present day operations.

No. 1.

## Laundering of Rayon Discussed

Providence, R. I.—The manufacture and uses of the two new textile fibers, rayon and rhea, and the adaption of fast-color dyes in the industry were leading subjects discussed by textile men at the meeting here yesterday and today of the Massachusetts-Rhode Island Laundry Owners' Association at the Biltmore Hotel. Speakers included E. L. Milliken, treasurer of the Belamose Corporation, Rock Hill, Conn., Herbert G. Beede, president of the Rheab Corporation and head of the Fales-Jenks Machin company, Pawtucket, and R. W. Smith of the Bradford yeing Association.

"Rayon," said Mr. Milliken, "is not a competitor of natural silk but is being legitimately mixed with natural silk to obtain effects not otherwise possible. Because of this mixing of materials the cotton and wool industries are profiting by rayon's special qualifications. Every day new fabrics combining rayon are being produced and bidding for public favor. In fact, cotton and wool manufacturers who have grasped this opportunity are the ones who seem to have operated most successfully during the depression of those two industries.

"The most recent gains made by rayon seem to have been in the demands of the cotton and wool trades where rayon's luster and dyeing qualities add that attraction necessary to satisfy the present craving for brightness and color in all textile fabrics.

"When proper care is used, rayon garments are improved by washing. The soft, silky luster of this wonder cloth is even more alluring and its delicate colorings even more beautiful after laundering. Being made from vegetable fiber, it holds the dyes, whereas silk an animal fiber, does not. A white rayon garment, no matter what its age, will not turn yellow. In the past the failure of rayon yarns in laundering has been fairly frequent and the cause for the failure has usually been given as poorly manufactured cloth.

"Tests of the laundering of various fabrics made up of rayon alone, or mixed with cotton, wool or silk,



show that rayon properly washed and ironed would not be a problem to the laundry industry. Furthermore, rayon is being improved in strength and other characteristics. This, combined with the laundry owners' increasing experience in handling rayon fabrics, will give more service to the laundry's customers."

"The adoption of fast colors is spreading in the textile industry," declared R. W. Smith of the Bradford Dyeing Association. "We find housewives throughout the country keenly interested in learning what they can expect from various dyes. The Federal Trade Commission is endeavoring to arrive at a standard of fast colors. 'Better business' bureaus are also investigating the situation and will bring pressure to bear in the usual fashion when they find merchandise advertised or sold as 'fast' that is not."

"One of the arguments against the use of real fast colors, such as we are offering, has been that they cost much more and that the customer will not pay for them. Today this argument has little or no foundation. It is true that fast colors are more costly to produce, but the difference is too small to justify the use of fugitive colors."

### October Cotton Consumption

Washington, Nov. 14—Cotton consumed during October amounted to 543,679 bales of lint and 75,750 bales of linters compared with 483,266 of lint and 70,008 of linters during September this year and 534,283 of lint and 57,452 of linters during October last year, the census bureau today announced.

Cotton on hand October 31, was held as follows:

In consuming establishments, 1,216,437 bales of lint and 82,000 of linters, compared with 866,011 of lint and 79,904 of linters September 30, this year, and 733,440 of lint and 74,286 of linters on October 31, last year.

In public storage and at compresses 4,499,382 bales of lint and 28,694 of linters, compared with 3,137,620 of linters and 18,875 of linters on September 30 this year and 4,226,427 of lint and 44,054 of linters on October 31, last year.

Imports during October totaled 12,402 bales, compared with 15,121 in September this year and 18,135 in October last year.

Exports during October totaled 1,421,482 bales, including 7,446 bales of linters compared with 752,324 including 1,880 of linters in September this year and 946,506 including 4,380 of linters in October last year.

Cotton spindles active during October numbered 32,425,206 compared with 31,551,630 in September this year and 31,165,034 in October, last year.

Statistics for cotton growing States follow:

Cotton consumed during October 366,099 bales, compared with 329,859 in September this year and 373,339 in October last year.

Cotton on hand October 21, in cotton growing States was held as follows:

In consuming establishments 894,725 bales, compared with 586,944 on September 30 this year and 468,984 on October 31 last year.

In public storage and at compresses 4,407,513 bales, compared with 3,057,139 on September 30 this year and 3,982,033 on October 31 last year.

Cotton spindles active in cotton growing States during October numbered 16,890,532, compared with 16,653,424 during September this year and 16,470,946 during October last year.

### The Improved Nasmith Comber.

(Continued from Page 20)

All the above points result in the following:—

A reduction of 2 per cent. in waste without deterioration of quality in the yarn can be obtained, and an increase of 15 per cent. to 18 per cent. in production.

The drawbox contains five lines of rollers and all wheels are inside, leaving a passage between adjacent combers quite clear whilst also economising floor space.

The gearing has been modified and is now much more silent.

The machine can also be made with twelve heads—six per side, of which each side is independent of the other. On both types of machines every adjustment and setting is much more convenient than on the ordinary Nasmith machine.

### Southern Spinners' Bulletin

The weekly bulletin of the Southern Yarn Spinners Association says:

"Yarn prices have shown some irregularity as a result of the Government Report of November 9th. Buying, however, has been quiet as spinners are holding firm to their level and prices, while buyers are inclined to wait, believing that they can purchase more advantageously later on."

"There are no available deliveries until after the first of the year. Buyers are finding difficulty in securing deliveries of contracts already placed, owing to the curtailment of operations due to water shortage."

"Spinners are hesitant to any commitments for delivery after the first of the year as so great a difference exists between their idea of price and the price buyers are willing to pay."

"There has been little evidence of short selling although conditions are favorable to such action. Possibly curtailment of operations has made speculators hesitant to go short of the market."

"The consumers of yarn are short on their supplies and in many instances are endeavoring to secure prompt deliveries on their requirements."

"The market on the whole is quiet and trading spotty."

### Enterprise Cotton Mills. Enterprise, Ala.

6,324 spinning spindles; 180 looms.  
A. M. Brock \_\_\_\_\_ Supt.  
D. B. Whaley \_\_\_\_\_ Carder  
B. H. Ogletree \_\_\_\_\_ Spinner  
T. Q. Hendrix \_\_\_\_\_ Weaver  
Lender Hendrix \_\_\_\_\_ Cloth Room  
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# RAYON OIL

No. 1243-A

A Lubricant For Processing Rayon

### UNUSUAL CHARACTERISTICS

Odorless

Light Color

Non-Oxidizing

Easy Penetrating

Completely Emulsifiable in Plain  
Water Without Soap or Alkalies

Because of this last feature Rayon Oil No. 1243-A not only lubricates thoroughly and uniformly but can be scoured from the goods in practically plain water, or at least with a minimum amount of soap, time, and mechanical handling.

*The use of this oil therefore overcomes one of the chief obstacles to the proper finishing of Rayon fabric or Rayon union goods.*

Our Technical Service Data Sheet  
Describing This Product in Detail  
Gladly Furnished on Request

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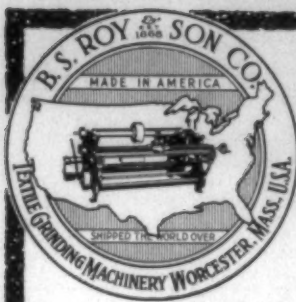
HARRISON, N. J.

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BOSTON





# B.S. Roy & Son Co.

Established 1868  
Worcester, Mass.

## Grinders for the Textile Industry

The Roy trade name has been favorably known to the industry nearly 60 years. The Roy organization has specialized in grinders and has developed grinders in pace with the advance of textile machinery.

Card grinders, napper roll grinders, shear grinders, garnet roll grinders.

We shall be glad to help you to economize on your grinding problem. Complete information gladly sent upon request.

## Attractive Winter Excursion Rates

VIA

## Norfolk-Southern Railroad

To destinations in North Carolina, South Carolina, Georgia, Florida and Alabama

Attractive schedules to  
Pinehurst, N. C., New Bern, Beaufort and  
Morehead City, N. C.

Ideal locations and ample facilities for conventions  
at either point.

For tickets or information, apply to any ticket  
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**J. F. DALTON**  
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Norfolk, Va.

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WRITE FOR SAMPLES



### Why Cotton Mills Have Been Moving South

(Continued from Page 14)

come to the mill some years ago the officers had been planning a co-operative store such as some of the mills have, where the help can buy at wholesale rates all the necessities of food, clothing and household supplies. He told me he had dissuaded them from this plan, on the ground that the people are suspicious and do not appreciate such things. That mill does not provide coal at cost, as does every other mill I saw or could learn about. It provides no laundry service, as so many of them do. The houses in the village are lighted by oil lamps. Toilets are outside in the back yards, and the only running water is in pipes on the back porches. All the houses are two-family houses. The general manager said to me as we stood looking at the most desolate village I saw anywhere, "We don't feel it is any of our business how the people spend their money. We pay 'em off once a week, and they spend it where they please."

The village of that mill was a hopeless-looking spot. The houses were about as good as the average in size and construction, but were in need of paint and repairs. They stood in rows like boxes on little brick stilts on a stretch of land as bare as the Sahara. There were none of the hedges or other markers between yards that make people feel like independent owners in their own little yards. None of the grassy lawns, shrubbery, trellised, vine-covered porches, thriving gradens and flowers that make most of the villages so attractive. In dry weather, sun-baked clay; in wet weather, mud.

It was the only village of its kind I saw, and, counting those seen in passing, I must have seen dozens.

The nearest second to this mill was a large mill in a city near the same size, but here conditions were decidedly better, especially in the newer half of the village. Here the houses are better in every way than the old houses, which, it should be said in justice, are very old, as the mill dates back before the Civil War. Here also the vice-president is deeply interested in the welfare of his people, but seems to be denied the authority to carry out his plans

This mill employs a welfare worker who is said in the city to be uncommonly successful. All efforts, however, are limited to relieving the distress of people who get into trouble of one kind or another. No efforts are made to teach the people better ways of living, or to make life any easier or pleasanter for them, and even medical attention in case of sickness seems, from the vice-president's account, to be grudging and meagre in the extreme. These two mills are a sorry contrast with the great majority of the mills I saw.

#### Large Mills Lead in Welfare Work

Passing on from such mills, an investigator finds every imaginable variation and degree of welfare and educational work, until he comes to the better class of large mills. In North Carolina there are very few large mills, but many small ones, and with different conditions prevailing the State or the municipalities take a more active part in the problem and educational and welfare measures are effectively handled by them. The one large mill, I saw in North Carolina, the Jenckes Spinning Co., owned by the Manville-Jenckes Spinning Company, of Pawtucket, R. I., seemed to have social and welfare work highly organized and on a good basis. It is not possible for the smaller mills to carry on such work. But in Georgia, Alabama and South Carolina large mills are the rule, and most of the large ones either operate their own schools which they had built that were later taken over by a municipality and are supported by the mill through taxation.

Probably as good a mill could be found to give a balanced idea of the work done by the large mills in all the States to improve the mental, moral, physical and social conditions and standards of their employees is the Avondale mill near Sylacauga, Ala. It is a large country mill, one of a group owned and operated by ex-Governor Comer and his sons. Other mills may excel it in some particulars, but none that I saw was more complete in all-round excellence. I think it is a fair example of that large group of Southern mills that are doing all in their power, in a whole-hearted, enthusiastic fashion, to improve the conditions of their employees.

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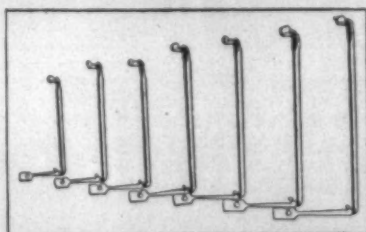
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lage houses all the employees, which with their families, number about 3200.

One of the first things Mr. Comer told me was that while he is carrying on a great deal of paternalistic work now, and he considers it necessary at this stage, he believes the people will eventually be above any need for it. I found this attitude in other mills also. The people now are too ignorant to look after themselves and their homes properly. They do not appreciate the importance of education, or the means of advancement. But the rising generation will know these things, and the men who are working with them have confidence in the native ability of the mill help to take these civic responsibilities upon their own shoulders in another generation or so.

### Model Conditions at Mignon Village.

Some idea of the extent and diversity of the effort to provide for the people in the village of Mignon, the name of the Avondale mill village, may be had from a list of village adjuncts and organizations. There is the ice plant, furnishing ice at cost; the store, which takes an inventory once a month to be sure it makes no profit; the laundry, providing laundry service at cost; the dairy, which is modern in every detail, even to milking from 85 to 100 cows per day by electricity, and which supplies good milk to the people at cost; the poultry farm, occupying a 45-acre tract, having 13,000 chickens of which 2400 are laying hens, and run on scientific principles, which provides an abundance of fresh eggs and young chickens at cost; there is the coal yard, which sells at cost, or about \$3.50 per ton, coal that half a mile away in Sylacauga retails at \$9 to \$10 per ton.

Every house in the village has a complete bathroom and electric lights, and water and electricity are included in the rental, which for a five-room house on a lot 100x150 is \$5 per month.

Any man who wants more garden space than his lot will permit may have it on nearby land free of charge and in one section of the village is a group of houses similar to the others, on five-acre tracts, where men who want to farm during the summer may operate truck farms while their families work in the mill, and when the farming season is over, may work in the mills themselves. These five-acre truck farms with houses equipped with city conveniences rent for \$8 per month.

Educational and recreational facilities include the nursery, kindergarten, school, campfire girls, boy scout troops, play grounds, athletic field, swimming and fish pond (a ten acre lake for this), musical instruction and orchestra, social, sewing and cooking clubs for girls and women, motion pictures and amateur theatricals, the hospital and the Avondale Sun.

All mills find that efforts spent in trying to reform adults are likely to time wasted, and they concentrate chiefly on the children. Nevertheless, many of them find that while the child's education begins in the nursery, so also does the mother's education sometimes begin here. Mrs. Grover, who has charge of

nursery, kindergarten and welfare work at Mignon, told me it was not uncommon for a mother who in the beginning has been intensely suspicious of the nursery and afraid to leave her child there at all, to come in after a while with a remark to the effect that her husband wants her to learn what Mrs. Grover does to the baby to make him so fat and well. Mrs. Grover said that when she started this work she used to try to interest mothers in proper care and feeding of children, only to be met by some such remark as, "My mother raised 14, and I reckon what was good enough for us is good enough for mine," but the nursery demonstration wins over such women and often makes them interested students of proper care of children.

But if the nursery helps to educate the parents, the kindergarten goes further in the same direction; and Mrs. Grover maps out her games and kindergarten course now with a view to reaching parents, whose curiosity, she finds, can often be aroused by the fragmentary accounts of games and picnics, the repetition of sentiments of tolerance and good-will, they hear from the children. I am inclined to think she has gone further in this direction than any other social service worker I found, but in other respects her work seems to be typical.

### Increase in School Enrollment.

Mrs. Liner, superintendent of education in Mignon, told me that when she took a position as teacher in the Mignon school in November, 1914, there were only 35 pupils enrolled, and they were so unruly that four teachers had preceded her in that same autumn, and they had been compelled at times to call in the police to help enforce discipline. Mrs. Liner never called the police. In her second year she was made principal, with two good assistant teachers. Under her guidance, and with the growth of the mills, the enrollment has grown in 11 years from 35 to 750, and the number of grades has been raised from five to nine. Next year the last three grades will be organized as a junior high school, the first step in the adoption of 6-3-3 plan of grading now spreading over the South. During school time the Avondale mills will not employ children under 16 years of age, although the age limit is 14.

The growth of this mill school may have been a little greater than the growth of educational and social service work generally in Southern mills in the same period, but even so it may be taken as typical of the remarkable growth in the work that has been going on for from 10 to 15 years throughout the industry in the South.

From Mignon school the brightest pupils go to the Sylacauga high school. It is customary in mills all over the South for the children who show ability and ambition to justify it to be encouraged and helped to go on through college. I have been told by Southern people not connected with mills that pressure is brought to bear on school graduates to compel them to work in the mills. I believe no greater mistake has ever

(Continued on Page 34)



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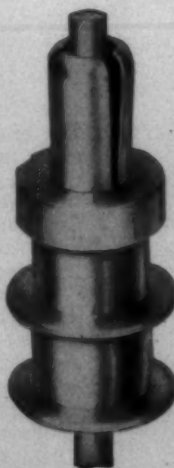
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## Notes on the Science Of Dyeing

(Continued from Page 8)

residue. Hence there are two groups of these dyestuffs.

1. The amido or alkyl amido derivatives using basic auxo-chromes and yielding basic dyes such as Malachite Green, Magenta and Victoria Blue.

2. The hydroxy derivatives using OH auxo-chromes such as the aurines.

Xanthene dyes comprise the phthaleins, eosines, phloxines and rhodamines. They contain the typical group of the anhydride of o-dihydroxy diphenyl methane.

We may go on to mention the Acridine, Anthracene, Quinone Imide, Thiazines, Indigo and Indigoid, Thiazols, Sulphur and Aniline Black series, but I believe that the ground covered is sufficient to guide the thoughts of my listeners to a clearer understanding of dye structure and the relationship of structure to color and dyeing properties.

The literature on the subject is limited and I might refer those interested to Dr. Bucherer's *Farben Chemie*.

## Sulphur Dyes on Mercerized Thread

(Continued on Page 12)

solution—fifteen pounds of the wax and five pounds of sal soda in five gallons of water. The soda is dissolved, then the wax in small pieces is slowly added during boiling. When the wax has combined, some well boiled starch paste is added to bring the whole to 25 gallons. The degree of stiffness the finished thread should possess determines the amount of starch to be used, and this can only be ascertained by making a few experiments.—Dye-stuff.

## Combustion Tests on Rayon and Cotton Yarns Reported.

Ignition tests of six samples of rayon yarn in comparison with combed cotton No. 35 have been made by the Bureau of Standards, Department of Commerce. These samples of rayon made by the cupreanum process were the only ones which ignited easier than cotton and these only slightly more readily. Rayon made by the viscose process had approximately the same ignition points as cotton; samples made by the Chardonnet process were less susceptible to ignition and by the acetate process were the least susceptible to ignition and burned more slowly. Rayon in general, as represented by the samples submitted, is not more hazardous from fire than cotton, while some kinds present less hazard. The Textile Division of the Department of Commerce wishes to add the suggestion that rayon is a continuous fiber which sheds little, if any, lint during the course of knitting or weaving. This makes it a very desirable textile yarn to handle from the viewpoint of fire hazard, whereas cotton and wool have the characteristic of forming a coating of lint throughout the mill.

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### Why Cotton Mills Have Been Moving South

(Continued from Page 32)

been circulated. I am positive from my observation that no such practice exists. The pressure to work in the mills comes from the parents and the children themselves. But this subject will be discussed in the article on Child Labor.

Education is not limited to school courses. Besides thorough courses in domestic science for the girls—and thousands of mills in the South are taking this course every year now—there are the campfire girls, the boy scout troops, and various clubs. In all of these membership is restricted to the best of the children, for two reasons: First, this makes membership a coveted honor to be striven for, and, attained, to be prized; and second, because this enables the standards of the clubs to be maintained on a higher level than if membership were promiscuous. These boys and girls are taught all the things that children of more favored stations receive in the best of homes,—the ideals of integrity, loyalty, devotion to a cause, courage and all the invaluable intangibles.

Some of the mills do not restrict membership in these organizations. There are arguments in favor of either plan.

Taking this club work into account, it would require a more exhaustive investigation than I could make to enable me to say with assurance that life and environment in the villages of the larger mills is not fully as good as that in small towns or even cities, home life considered. Certainly the mill children have advantages few city children have.

At Mignon star girl pupils are given summer trips at the expense of the mill. In 1921, 12 girls were taken to the Alabama Women's College at Montevallo for summer courses in swimming, gymnasium, choral singing, dancing and cooking. They were thrown into contact with many girls from all over the State, some of them from the best families of Alabama. I asked Mrs. Grover how the city girls treated the mill girls. She replied that the mediocre ones were inclined to look down upon the mill girls, but that the girls of better breeding appeared to feel a great responsibility for them, took them under their wings, and treated them well. She said that when those 12 girls returned to Mignon they had greater poise and polish, a broader outlook on life, and higher ideas in some respects, and she added that during the following year their influence in the village had been apparent.

This trip had proved so successful that it has been repeated on a growing scale in succeeding years. In 1924, 15 girls were taken to a camp at White Mountain and 10 to Montevallo. Mrs. Grover says the girls in the school strive for these trips as the greatest prizes of their lives.

For promising youths and men in the mill there is a summer course in textile work at the textile college of the University of Alabama, the mill paying all expenses and full-time wages during the course. A good many other mills have somewhat different plans for developing

Graniteville a miniature mill is being built, complete in all details, to be used as a training school, the plan being to have likely lads go through a course of instruction combined practice in which they will work up through the mill from the start to executive positions.

Many of the mills attempt women's clubs of various kinds, with varying degrees of success. Here, however, they come against the fact that adults' character and habits are already formed and are hard to modify. The women's clubs at Mignon seem to me from Mrs. Grover's account to be more successful than the average, and since I am trying to stick to what is typical, I will not discuss them beyond saying that Mrs. Grover's credits them with having worked a revolution in the dress and general appearance of the girls and women of the village.

For amusement the people have a theater in which are shown motion pictures at a nominal charge, dances and amateur theatricals. A professional theatrical director is employed on full time to train the actors in their plays, to select and give the motion pictures, etc., and a great abundance of fancy costumes make the costume room of the theater look like the costume room in a commercial theater. There are also athletic fields and league games in baseball and basketball, and handsome trophies for the league champions. There is an orchestra and a band, and free instruction in music. Apparently the people take a lively interest in all of these things.

At Mignon there is a lake made by the mill, and equipped with spring board and dressing rooms, while a swimming instructor teaches swimming and looks out for safety generally. I think all the large mills have swimming facilities and instruction, some of them having white tiled pools as fine as I have seen anywhere.

If there is a scheme or a device known for keeping people pleasantly or profitably employed in recreation time that is not in use in Southern cotton mills, I have not seen or heard of it. No one mill has them all. Some have advantages not found at Mignon. In South Carolina the four mills of the Graniteville Manufacturing Co., six miles from the nearest town, have set aside 4000 of their 17,000 acres as a fish and game preserve. The reservation includes four lakes with a total area of about 600 acres. Game laws are enacted and enforced by the mill people themselves, and only in case of a knotty problem is Mr. Leitner, vice-president of the company, appealed to for help. With such a natural advantages it is felt that less organized welfare work is necessary than at a mill having no such attraction. It should be said here, however, that the labor at the Granite and Vaulause mills appears to be an exceptionally high type, these mills being very old, and labor turnover is less than three per cent. per year.

In short space I have tried to give an idea without any rhapsodizing of the thorough and lavish efforts at all-round education and improvement of mental, moral, physical and social conditions of the people. So



talent and training overseers from the ranks. At the ancient mill at far I have nothing of religious influences, although the people themselves are strongly inclined to religion, and most of the mills contribute freely to church support. Some of them provide buildings for the various denominations, while in others the congregations own their church buildings and are free of debt, and the mill contributes annually to running expenses.

Next week I will discuss the value from various standpoints, of all this educational welfare work.

## This Jobber Saw the Light

**A** SOUTHERN jobber, who handles annually hundreds of thousands of dollars of cotton goods, selling to small merchants in the mill and other towns of the Carolinas, called in at the executive offices of the American Cotton Manufacturers' Association recently to discuss the textile situation and to inquire particularly as to when conditions would improve and the mills be running full time. In explanation of his inquiry, he said:

"As you know, our trade is dependent on the small merchants operating in the territory within 100 miles of Charlotte. The majority of these towns are mill centers and these small merchants depend on the mill people who buy their goods. Quite a few of these merchants have been in our offices recently, and in explanation of their reduced purchases state that the buying power of their customers has been sharply curtailed by reason of the fact that the mills are running only two and one-half to three days per week, with commensurate reductions in wages. They say that they can not buy more goods until the mills resume full time operations. You can readily see how important it is to us and to them that the mills get busy again."

Now the Secretary of the Association knew of his own knowledge that this particular jobber was largely stocking up with New England goods — Amoskeag, Parkhill, Renfrew and other Northern-made fabrics — and that Southern-made products were the exception in his large establishment, although admittedly as good and as reasonable in price as similar Northern fabrics. Whereupon he said:

"How can you expect Carolina

and Southern mills to be running full when you and others like you buy goods made in New England and shipped a thousand miles down here when you can purchase equally as good fabrics and at approximately the same prices from Southern mills? You are selling your inheritance for a mess of pottage, the result being that those mills you buy from are running, whereas many of those at your very doors are operating short time. Now consider! Had you and your associates bought Dunean, Judson, Cramerton, Riverside and Dan River, Erwin, Atla Vista, Henrietta, Pacolet, Exposition and other Southern-made fabrics, these mills would be running full time, full pay envelopes would be distributed to their operatives weekly and money would be flowing over the counters of the small merchants in all these towns and villages. These merchants in turn would be paying up their accounts with you, making large commitments for additional cotton goods in the future, and everybody would be happy. As one Southern man to another, both of us alike concerned in Southern development, allow me to ask how you can justify in your own mind your past purchasing policy in respect to cotton goods. If Southern-made goods were not available, comparable both in quality and price with New England fabrics, I would not say a word, but they are and you can find them with a minimum of effort. The solution of the problem about which you ask is in your own hands. Is this not so?"

After some reflection this jobber admitted the logic and accuracy of this argument and declared his intention of stocking and emphasizing the sale of more Southern-made goods.

Southern manufacturers should urge the local buying of their own fabrics; Theodore Price's remarks on this subject at the recent Textile Diversification dinner in Charlotte were not only in a very happy vein but very much to the point.—ACMA Gazette.

### Move Detroit Offices.

The Chicago Fuse Manufacturing Company, of Chicago, manufacturers of Union and Gem Fuses and Union outlet and Gem switch boxes, have moved their Detroit office from the Transportation Building to 429 Wayne street.

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## Cotton Goods

New York.—There was only moderate trading in the cotton goods markets during the week, business being held back by the uncertainty caused by the Government crop report. There were some indications that prices would go slower on the basis of the larger cotton crop, but prices held fairly firm throughout the week. Sheetings prices very virtually unchanged with a fair amount of business reported. Print cloths were slightly lower. There were some fairly good sales for delivery in the first quarter of next year.

The largest buying for the week was by the automobile manufacturers. Market reports showed that the sales of these goods ran to 60,000 pieces of 37-inch drills and 1.30 yard sateens. Fine combed mills are reported to be well sold through the remainder of the year.

As yet there has been no price revision in finished lines. Bleached goods were slightly lower. There was some additional business on wide sheetings, sheets and pillow cases. New lines of blankets for fall 1926 were opened at slightly lower prices than those of last year.

As a whole, the cotton goods markets continued somewhat unsettled and buying for future delivery has been very cautious. Most goods in the primary markets are little activity and prices are rather uncertain. Print cloths were steady but quiet. Bids of 10 cents for 68x72s for delivery in January and February were declined by mills. Prices showed considerable irregularity. Most of the business reported covered lots of 10,000 to 20,000 yards.

There was a fair inquiry for combed broadcloths, but buyers were not inclined to place large orders under prevailing conditions. There was a larger business in special constructions such as curtain materials and similar fabrics. Some of the higher count rayon specialties were in good demand deliveries to start within the next six to eight weeks.

While actual business in tire fabrics was not large, inquiries for 4,000,000 pounds came into the market late in the week, deliveries wanted being in the first half of 1926. While a number of the larger mills are well sold through the first quarter of the year, the business referred to above can be handled should the inquiries develop in actual business.

The cotton duck market was somewhat easier with prices slightly lower. List prices have not been lowered, but concessions have been

reported in several quarters. Buying was on a limited basis last week, most of it being for filling in purposes.

Silk and cotton mixtures showed practically no change in quoted prices, but several buyers reported that they were able to secure them under prevailing market prices. Buying as a whole was quiet.

The demand in the Fall River print cloth market was somewhat better last week especially with regard to 36-inch low counts. Twills and sateens also showed some added interest and although sales were confined to small volumes the broadening of the inquiry was noticeable. Spots were in demand with deliveries also extending through the next six to eight weeks.

Wide and narrow print styles continue very dull with prices somewhat irregular and in some cases an eighth lower than last week. With the irregularity in cotton, buyers continue on the basis of buying mostly for their immediate wants, and sales for the week are estimated at 50,000 pieces.

Cotton goods prices were quoted as follows:

Print cloths, 28-in., 64x64s	67%
Print cloths, 28-in., 64x60s	6%
Print cloths, 27-in., 64x60s	6%
Gray g'ds., 38½-in., 64x64s	9%
Gray goods, 39-in., 68x72s..	10½
Gray goods, 39-in., 80x80s..	12½
Brown sheetings, 3-yard...	13
Brown sheetings, 4-yard...	11½
Brown sheetings, stand....	14
Ticking, 8-ounce .....	24
Denims .....	19
Staple ginghams, 27-in....	11½
Kid finished cambrics ....	9½a10½
Dress ginghams .....	13½a17½
Standard prints .....	9½

#### American Knit Goods Markets Importing Knitting Machines

Exports of knitting machines from the United States during 1922 and 1923 were valued at \$2,000,000 annually, at \$3,000,000 during 1924, and at \$2,500,000 during the first seven months of 1925, according to the Textile Division of the Department of Commerce. The 1925 exports were sent in large quantities to England, Argentina, Canada, and Italy. It is interesting to note that many of the countries, who are the largest users of American knit goods, are also buying heavily of these American knitting machines. After January 1, 1925, statistics on hosiery knitting machines will be issued separately by the Statistical Division.

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OF ST. LOUIS, MO.

P. H. PARTRIDGE, Agent, Charlotte, N. C.

Extra staples, and good 1 1-16 and 1¼ cotton from Arkansas, Oklahoma, and Texas, and Memphis territory.



# The Yarn Market

Philadelphia, Pa.—The yarns markets were generally quiet throughout the week. Prices on card warps and skeins moved up slightly as the cotton market strengthened and because of the rather heavy buying by weavers and knitters during the past month. Concessions were reported on some spot lots handled in this market, but spinners as a whole held their prices very firm. Quotations in this market were uncertain and irregular, but showed little change from the previous week.

Mills in the South using power from the Southern Power Company, are now able to operate three and a half days per week, but due to the fact that the majority of the mills are well sold to the end of the year it is not expected that they can take on any substantial amount of business this year. Yarn for spot and nearby delivery are reported scarce and to be had only at a premium. Stocks held here by dealers continue small and have shown no increase from the low point reached last month.

Southern mills making combed yarns are now well sold to the first quarter of next year and some of them as far ahead as March. The demand during the week was rather slow, but mills kept prices firm and higher prices are predicted if cotton continues to advance. Mills are carrying practically no surplus yarns and supplies are so low that they can absorb a big volume of production before normal stock conditions are reached.

Mercerized yarns continued in fair demand. Prices were very firm and there is no immediate prospect for securing them for anything like prompt shipment where large quantities are wanted.

Yarn prices in this market were published as follows, but under present conditions were regarded as purely nominal:

Southern Two-Ply Chain Warps.	
8s	35 a
10s	36 a
12s	37 a
14s	38 a
16s	39 a
20s	40 a40 1/2
24s	43 a44
26s	44 a45
30s	45 1/2 a46
40s	56 a57
50s	66 a67
Southern Two-Ply Skeins.	
8s	35 a
10s	36 a
12s	37 a
14s	38 a
16s	39 a
20s	40 a
24s	43 a
26s	44 a
30s	45 a
40s	55 a56
40s ex.	57 a58
50s	65 a66

60s	72 a
Tinged Carpet, 3 and 4-ply	34 a
White Carpet, 3 and 4-ply	35 a
Part Waste Insulated Yarn	
6s, 1-ply	31 1/2 a
8s, 2, 3 and 4-ply	32 1/2 a33
10s, 1-ply and 3-ply	34 a
12s, 2-ply	35 a
16s, 2-ply	36 1/2 a37
20s, 2-ply	39 a
26s, 2-ply	43 a
30s, 2-ply	44 a44 1/2
Southern Single Chain Warps	
10s	36 a
12s	37 a
14s	38 a
16s	39 a
20s	40 a
24s	42 a
26s	43 a
30s	44 a45
40s	55 a
Southern Single Skeins.	
6s	35 a
8s	35 1/2 a
10s	36 a
12s	37 a
14s	37 1/2 a
16s	38 1/2 a
20s	39 a
22s	40 a41
24s	42 a
26s	42 a43
30s	44 a45
Southern Frame Cones	
8s	34 1/2 a
10s	35 a
12s	35 1/2 a
14s	36 a
16s	36 1/2 a
18s	37 1/2 a
20s	38 1/2 a
22s	39 a
24s	40 1/2 a41
26s	41 1/2 a42
28s	42 1/2 a43
30s	41 1/2 a42
40s	45 a46
50s	53 a54

\*Tying in.  
Southern Combed Peeler Skeins, Etc.—Two-Ply.

16s	56 a60
20s	58 a62
30s	65 a67
36s	75 a80
40s	80 a85
50s	87 1/2 a90
60s	90 a95
70s	1 05a1 10
80s	1 18a1 20
Southern Combed Peeler Cones.	
10s	48 a49
12s	49 a50
14s	49 1/2 a50 1/2
16s	52 1/2 a
18s	51 a52
20s	52 a
22s	53 a
24s	56 a
26s	56 1/2 a
28s	57 a
30s	60 a
32s	62 a
34s	65 a
36s	72 a
38s	74 a
40s	75 a
50s	80 a
60s	90 a95
70s	1 05a
80s	1 15a
Eastern Carded Peeler Thread—Twist Skeins—Two-Ply.	
20s	50 a
22s	51 a
24s	56 a
30s	59 a
36s	63 a
40s	65 a
45s	70 a
50s	75 a
Eastern Carded Cones.	
10s	41 a
12s	42 a
14s	43 a
20s	44 a
22s	47 a
26s	51 a
28s	53 a
30s	55 a

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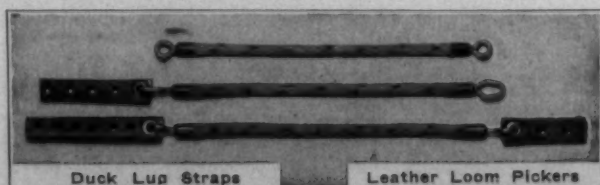
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Master Mechanic for Southern Mill. 80,000 spindles. Apply to "L", care Textile Bulletin.

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One operator for American Work Drawing Machine. Must be able to do his own repair work. Apply in person or address Santee Mills, Bamberg, S. C.

### Wanted

Experienced man on Barber-Colman tying-in machine. Good pay and living conditions. Address: B. C. care Southern Textile Bulletin.

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Two salesmen, one to cover North Carolina and the other Georgia, now calling on cotton mills, to handle our Leather Belting, Loop Pickers, Strapping, etc., with their other lines on commission basis. Greenville Belting Co., Greenville, S. C.

### \$25.00 REWARD

for the arrest of Zeb Bearden and Willie Crumpton. Bearden has black hair, dark gray eyes, age about 25 years, weight about 145 pounds, height 5 ft. 7 in., large upper front teeth. The girl with him, Willie Crumpton, has medium brown hair, light blue eyes, height 5 ft., weight about 105 pounds, one upper front gold tooth, fair complexion, age about 20 years. Bearden is a weaver, or loom fixer, and they were somewhere in North Carolina the last account. Notify G. N. Whitt, Chief of Police, Seneca, S. C.

**Cotton Mill Equipments For Sale**  
We have for sale several good complete cotton mill equipments. Three to twelve thousand spindles each. Modern machinery. Prices very attractive. Address: Hunter Machinery Co., Marion, N. C.

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During the three months' membership we send the applicant notices of all vacancies in the position which he desires and carry small advertisement for two weeks.

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WANT position as carder or spinner. Have been overseer in both departments and also experienced as assistant superintendent. Best of references. No. 4683.

WANT position as superintendent of small mill or assistant in larger mill. Now employed as carder in large plant. Good references. No. 4684.

WANT position as manager or secretary of 5,000 to 10,000 spindle mill. Prefer Alabama, or state west of Alabama. Am well qualified and can give excellent references. No. 4687.

WANT position as second hand in carding in large room. Have had 20 years experience. Married, age 32 sober, musician. Prefer South Carolina. Good worker, know colored and plain work. No. 4688.

WANT position as overseer spinning or carding and spinning. Experienced man who can deliver the goods. Good references as to character and ability. No. 4689.

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WANT place as overhauler in card room. Can give excellent references from mills in which I have done this work and can give satisfaction in every respect. No. 4695.

WANT position as overseer carding or assistant superintendent. Prefer mill on white goods. Age 26, single, 9 years experience. Now overseer and night superintendent. No. 4696.

WANT position as master mechanic. Now employed, good reasons for wishing to change. Large job preferred. Good references. No. 4697.

WANT position as overseer spinning, or spooling, winding and twisting. Now employed but wish larger place. Long experience and good references. No. 4698.

WANT position as superintendent of medium size mill or overseer carding or spinning in larger plant. Now employed as assistant superintendent. Good references. No. 4699.

WANT position as superintendent of yarn mill. Long practical experience as superintendent and overseer and have excellent record. No. 4700.

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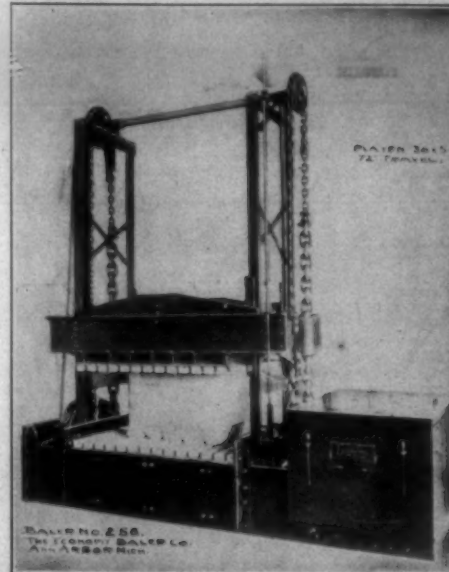
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Transmission Silent Chain—  
Link-Belt Co.  
Morse Chain Co.  
Trucks (Mill)—  
Diamond State Fibre Co.  
Rogers Fibre Co.  
W. T. Lane & Bros.  
Trucks For Pin Boards—  
Washburn.  
Tubes-Fibre—  
Diamond State Fibre Co.  
Tubes (Paper)—  
Sonoco Products Co.  
Turbines (Steam)—  
Allis-Chalmers Mfg. Co.

Twisting Machinery—  
Collins Bros. Machine Co.  
Draper Corporation.  
Fales & Jenks Machine Co.  
Saco-Lowell Shops.  
Whitin Machine Works.  
Twisting Tapes—  
Barber Mfg. Co.  
Underwear Machines—  
Merrow Machine Co.  
Ventilating Apparatus—  
American Moistening Co.  
Parks-Cramer Co.  
Ventilating Fans—  
B. F. Perkins & Son, Inc.  
Warpers—  
Barber-Colman Co.  
Cocker Machinery & Foundry Co.  
Crompton & Knowles Loom Works.  
Draper Corporation.  
Easton & Burnham Machine Co.  
Saco-Lowell Shops.  
T. C. Entwistle Co.  
Warp Dressing—  
Arnold, Hoffman & Co., Inc.  
Boson & Lane.  
Draper Corporation.  
Hart Products Corp.  
E. F. Houghton & Co.  
National Oil Products Co.  
Seydel-Woolley Co.  
L. Sonneborn Sons Co.  
Warp Stop Motion—  
Draper Corp.  
Hopedale Mfg. Co.  
R. I. Warp Stop Equipment Co.  
Warp Tying Machinery—  
Barber-Colman Co.  
Warper Shell—  
Cocker Machinery & Foundry Co.  
Washers (Fibre)—  
Rogers Fibre Co.  
Waste Reclaiming Machinery—  
Saco-Lowell Shops  
Whitin Machine Works  
Woonsocket Machine & Press Co., Inc.  
Waste Presses—  
Economy Baler Co.  
Water Wheels—  
Allis-Chalmers Mfg. Co.  
Weighting Compounds—  
Arabol Mfg. Co.  
Bosson & Lane.  
Hart Products Corp.  
Marston, Jno. P.  
Metz, H. A.  
National Oil Products Co.  
Jacques Wolf & Co.  
Seydel-Woolley Co.  
L. Sonneborn Sons, Inc.  
Well Drillers—  
Sydnor Pump and Well Co.  
Virginia Machinery & Well Co., Inc.  
Whizzers—  
Tolhurst Machine Works.  
Winders—  
Easton & Burnham Machine Co.  
Saco-Lowell Shops.  
Universal Winding Co.  
Windows—  
Carrier Engineering Corp.  
Parks-Cramer Co.  
Window Guards—  
Cyclone Fence Co.  
Wire Partitions—  
Cyclone Fence Co.  
Yardage Clocks—  
T. C. Entwistle Co.  
Yarns—  
Paulson, Linkroum & Co.  
Mauney-Steel Co.  
Yarn Tension Device—  
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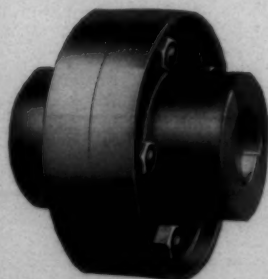


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